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**An Exploration of Children's Play: Classifying Play and Exploring Gender
Differences in Aggressive Play**

by

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**A thesis submitted in partial fulfilment of the requirements for the degree of
Doctor of Clinical Psychology**

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Table of Contents

Table of Contents	Page ii
List of Tables and Graphs	v
Acknowledgements	vi
Declaration	vi
Summary	vii

Chapter One: Literature Review – Types, Stages and Functions of Play: Classifying Play by Developmental Domains

Title	1
Abstract	2
1 Introduction	3
2 Method of Literature Review	3
3 Stages and Types of Play	3
3.1 Piagetian ideas	4
3.2 Critique of Piagetian Stage Model	6
3.3 Developments by Other Authors	6
3.3.1 Games with Rules	6
3.3.2 Other Types of Play	7
3.4 Summary of Types and Stages of Play	15
4 Theories about the Functions of Play	17
4.1 Instinct and Wish-fulfilment	17
4.2 Enhancing Development	18
4.3 Safeguarding from Consequences/ Safety	20
4.4 Relief of Tension/ Expressing Emotions and Mastery	21
4.5 Reality-Fantasy	23
4.6 Summary of the Theories about the Functions of Play	23
5 Connecting Theories of Play to Types and Stages of Play	25
5.1 Why connect Them?	25
5.2 Developmental Domains of Play	26
5.2.1 Sensorimotor Development	28
5.2.2 Cognitive Development	28
5.2.3 Socio-communicative Development	28
5.2.4 Imaginative/ Creative Development	29
5.2.5 Emotional Development	30
5.3 Summary of the Classification System of Play	31
6 Critique of Literature	31
7 Implications	32
7.1 Clinical Implications	32
7.2 Research Implications	33
8 Conclusions	33
References	34

	Page
<u>Chapter Two: Main Paper – The Occurrence of Developmental Domains of Play Using The Make a World Technique</u>	
Title	38
Abstract	39
1 Introduction	40
1.1 Background	40
1.2 Definitions of Play	41
1.3 Assessments of Play	42
1.3.1 The Assessment Setting	42
1.3.2 Questionnaire Measures	43
1.3.3 Observational measures- Free Play with Peers	44
1.3.4 Observational Measures- Free Play with Parents	46
1.3.5 Observational Measures- Structured Play Observed by Clinician	47
1.4 Summary	51
2 Aims of the Present Study	51
3 Methodology	52
3.1 Design	52
3.2 Ethical Approval	52
3.3 Participants	52
3.4 Measures and Materials- The Make a World Technique	53
3.5 Procedure	54
4 Pilot Study	55
5 Data Analysis	55
5.1 Creation of Coding Criteria	56
5.2 Analysis of Developmental Domains	58
6 Reliability	59
7 Results	59
8 Discussion	64
8.1 Discussion of Results	64
8.1.1 Domains of Play	64
8.1.2 Gender Differences	67
8.2 Limitations of Methodology	68
8.2.1 The Coding System and Analysis	68
8.2.2 The Observational Setting	70
8.2.3 External Events	70
8.2.4 Reflection on Using The Make a World Technique	71
8.3 Implications for Clinical Practice and Future Research	71
8.4 Conclusions	72
References	74
<u>Chapter Three: Brief Paper – Exploring Gender Differences in Aggressive Play: An Observational Study</u>	
Title	80
Abstract	81
1 Introduction	82
1.1 Background	82
1.2 Types of Toys	82

	Page
1.3 Content of Play	83
1.4 Gender Differences in Aggressive Play	84
1.5 Summary	86
2 Aim of the Present Study	86
3 Methodology	87
3.1 Design	87
3.2 Ethical Approval	87
3.3 Participants	87
3.4 Measures and Materials	88
3.5 Procedure	89
4 Pilot Study	89
5 Data Analysis	90
6 Results	91
7 Reliability	93
8 Discussion	93
8.1 Discussion of Results	93
8.2 Limitations of Methodology	94
8.3 Implications for Clinical Practice and Future Research	96
8.4 Conclusions	97
References	99

Chapter Four: Research Review

Title	102
Abstract	103
1 Introduction	104
2 Methodological Reflections	105
3 Observations on the Research Process	106
3.1 Developing the Research Idea	106
3.2 The Year Group	107
4 Personal Reflections	108
5 Conclusions	111
References	112

Appendices

Appendix 1: Instructions for Authors	113
Appendix 2: Letters for Ethical Approval of Research	119
Appendix 3: Chapters Two and Three- Certificate for Participants	124
Appendix 4: Chapters Two and Three - Covering Letter and Information Sheet	126
Appendix 5: Chapters Two and Three - Consent Form	132

List of Tables and Graphs

<u>Chapter One: Literature Review</u>	Page
Table 1: Singer’s Stages of Play	10
Table 2: Sheridan’s Types of Play	14
Table 3: Summary of the Different Ideas about Stages or Types of Play	16
Table 4: Summary of the Different Theories about the Functions of Play	24
Table 5: Summary Combining Functions and Types or Stages of Play	27
 <u>Chapter Two: Main Paper</u>	
Graph 1: The Average Percentage of Time Spent Playing in Each Developmental Domain Across all Children	60
Graph 2: Percentage of Time Spent Playing in Each Domain for Individual Children	62
Graph 3: The Average Percentage of Time Boys and Girls Spent Playing in Each Development Domain	63
Table 1: The Ranges of Percentage of Time Spent Playing in Each Domain Across all Children	61
 <u>Chapter Three: Brief Paper</u>	
Graph 1: Number of Seconds and Percentage of Time that Girls and Boys Displayed Aggressive Play	92
Graph 2: Average Number of Seconds and Average Percentage of Time that Girls and Boys Displayed Aggressive Play	93

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Declaration

The thesis was carried out under the supervision of Dr. Delia Cushway and Mrs. Jacky Knibbs, who helped to design the study and to shape the developmental domains in Chapter One. I carried out all the observations and apart from these collaborations the thesis is my own work. Authorship of any papers from this work will be shared with the above. The thesis has not been submitted for a degree to any other university. The literature review will be submitted to Clinical Psychology Review (Fletcher, Cushway, Knibbs), the brief paper will be submitted to Child and Adolescent Mental Health (Fletcher, Cushway, Knibbs), and the main paper will be submitted to Clinical Child Psychology and Psychiatry (Fletcher, Cushway, Knibbs) (see appendix 1 for instructions to authors). Ethical approval was obtained in my maiden name Soper; I have recently changed my name to my married name Fletcher.

Summary

The aim of this study was to explore children's play, looking at developmental domains of play and gender differences in aggressive play. Chapter One reviewed existing literature on types and functions of play. Five developmental domains of play that incorporate types and functions were proposed, namely sensorimotor, cognitive, socio-communicative, imaginative/ creative and emotional. Chapter Two involved an observational study of children's play. An attempt was made to explore the existence and occurrence of the developmental domains that were proposed in Chapter One. Results suggested that the domains exist in this sample of children's play. Children statistically spent the most time in sensorimotor and imaginative/ creative play, compared to the other types of play. No statistical difference was found in gender with respects to time spent playing in the domains. Clinical implications are discussed. Future research is required to create more valid and reliable criteria for the domains and age-related norms. Chapter Three investigated gender differences in the duration of aggressive play. An observational study of children's play was carried out. The duration of time of aggressive play in each child's play was recorded and analysed. Results showed that boys displayed statistically more aggressive play than girls in this sample. Clinical implications are discussed. Chapter Four reviews the previous three chapters, looking at methodological limitations, observations of the research process and personal reflections.

Chapter One: Literature Review -
Types, Stages and Functions of Play:
Classifying Play by Behavioural Domains

Abstract

This review explores the literature on the various types and stages of play, commenting on similarities and differences between models. Most theorists describe a type of exploratory play, sensorimotor play and symbolic or pretend play (e.g. Piaget, 1962; Singer, 1994; Pellegrini and Smith, 1998). Theories about the functions of play are also investigated and remarks are made on their similar characteristics. There seems to be agreement that an important reason for children to engage in play is for enhancing development (e.g. Vygotsky, 1967; Winnicott, 1971; Bruner, 1990). In addition, theorists suggest play enables the child to try out new ideas and explore in a safe environment (e.g. Erikson, 1963; Winnicott, 1971). As there are similarities between functions and stages/ types of play, an attempt is made to amalgamate the categorisations of types of play with the functions of play. An idea is also presented that suggests all the functions of play can be viewed as having a developmental consequence and that play can be classified in to five developmental domains, namely sensorimotor, cognitive, socio-communicative, imaginative/creative and emotional development. Implications for clinical practice and future research are discussed.

1. Introduction

There are different theories in the literature about the functions of play, as well as various descriptions of types or stages of play. The first section of this literature review will explore categorisations of different types or stages of play, looking for similarities and differences between models. The next section will summarise theories of children's play and suggestions will be made on how they may be integrated. The last section will bring together the theories of children's play with categorisations of types of play. An idea about how to classify play in terms of aspects of play, linking function with stage will be discussed.

2. Method of Literature Review

Searches for the literature review were conducted using Psychinfo. The period of time from 1988-2003 was explored. The search words used were children, play, Piagetian and neo-Piagetian. In addition, both the library and publisher catalogues were scrutinised for books and articles about play and play therapy. References in articles and books were followed up.

3. Stages and Types of Play

There are different ideas about the stages and types of play. These are examined below, with ideas on similarities and differences.

3.1 Piagetian Ideas

Piaget (1962) identified three developmental stages of play: practice/sensorimotor play, symbolic play and games with rules. Piaget suggests that practice play (sensorimotor) is experienced for the mere pleasure of it. It occurs

from infancy to the second year. The infant acquires control over movements, motor skills and learns to co-ordinate gestures. He/she experiments with touch, sight and sound. Piaget (1962) classified symbolic play into the following categories:

Categorisation of Symbolic Play

- 1. Projection of symbolic schema on to new objects:-** The child creates symbolic representations. Once the child has done this, they then apply familiar schemas to other people and objects. For example, a child pretending to eat and drink with bits of wood and then holding up the wood to the mouths of others.
- 2. Projection of imitative schemas on to new objects:-** The child's symbolic schemas are acquired by imitation rather than from the child's own activity. For example, a child who makes her doll use the telephone using a leaf instead of a receiver.
- 3. Simple identification of one object with another:-** For example a child moving an empty box 'to and fro saying 'motycar'' (p.124, Piaget, 1962).
- 4. Identification of child's body with that of other people or objects:-** For example crawling 'on all fours, saying 'miaow'' (p.125, Piaget, 1962).
- 5. Simple combinations:-** These games involve the 'construction of whole scenes, instead of isolated imitations' (p.127, Piaget, 1962). For example, feeding a doll by talking in the way she was encouraged to eat her own meals.
- 6. Compensatory combination:-** These games involve correcting reality. The child plays at doing something that is normally forbidden or pretends that

something has happened that has not really occurred. For example, a child who is jealous of the new baby may hit his/ her doll.

- 7. Liquidating combinations:-** This type of play involves the child reliving a difficult or unpleasant situation by symbolically changing it. For example, a child 'was afraid when sitting on a new chair at table. In the afternoon, she put her dolls in uncomfortable positions and said to them: 'It doesn't matter. It will be all right,' repeating what had been said to her' (p.133, Piaget, 1962).

Piaget suggests that symbolic play occurs in children aged 2-6-years-old. From the ages of 4-7, children are described as losing interest in simple symbolic play. Play becomes more ordered, and the 'exact imitation of reality' and 'collective symbolism' appears (p.135, Piaget, 1962). Collective symbolism is described as 'differentiation and adjustment of roles' (p.135, Piaget, 1962). For example, the child playing two roles with different voices and using stones to symbolise food. Games with rules are played between 7 and 11. Here children have begun to understand certain social concepts of cooperation and competition.

These stages of play reflect the stages of development described by Piaget (1962):

- **Sensori-motor stage (birth to 18 months)-** sensori-motor play.
- **Developing operations (18 months to 7 years)-** symbolic play.
- **Concrete operations (7-12 years)-** Games with rules.
- **Formal operations (12 years to adulthood)-** Games with rules.

3.2 Critique of the Piagetian Stage Model

Piagetian ideas have been criticised by a number of authors. Bryant (1990) argues that Piaget does not pay attention to antecedent-consequent relations, which may determine development. For example, environment and familial factors may have an impact on development. Therefore, children's development and stages of play might not be as fixed as Piaget suggested. Halford (1989) examined 25 years of research on cognitive development from a Piagetian perspective. He concluded that there was no clear evidence to confirm Piaget's cognitive structures and fixed age of development. Light (1990) highlights the move from studying intellectual processes of the child in relative isolation, as in the work by Piaget (1962). More recently then there is a focus on the extent to which thinking and knowing are related to contextual constraints, and children do not develop in such a rigid way. Contextual constraints such as socio-economic, familial, environment factors, may impact on thinking and knowing.

3.3 Developments by Other Authors

3.3.1 Games with Rules

Piaget (1962) identified games with rules as one stage of play. Similarly, Courtney (1982), Garvey (1990), Singer (1994) and Sheridan (1999), suggested that games and play with rules are types of play. However, Vygotsky (1967) argued that there is no such thing as play without rules. He used the example of children playing at mother and baby to illustrate this. He said there are rules of maternal behaviour that the child follows. Only actions that fit these rules will be acceptable in the play situation. Vygotsky (1967) referred to experiment based observations, to support this idea. Vygotsky (1967) also argued that all play

involves imaginary situations. He gave the example of playing chess to demonstrate how play contains an imaginary component. When playing chess, players imagine different moves and options, hence involving imaginary situations.

One shortcoming of Vygotsky's ideas is that they do not accommodate sensorimotor play. This type of play does not seem to adhere to rules or to involve an imaginary component.

3.3.2 Other Types of Play

Garvey (1990) identified 6 types of play, which follow some Piagetian ideas. These were generated from her clinical work with children and from observations of children's play, through a one-way mirror. Although Garvey describes the process of the research and how she observed children's play, it is not clear how she arrived at the different categories of play. Garvey does use examples to illustrate the types of play, which adds support to her suggestions. The types of play she proposes are below. Links with Piaget's stages of play are presented in italics.

- 1. Play with motion and interaction:** e.g. skipping/ jumping. (*Games with rules; sensorimotor*).
- 2. Play with objects:** Finding out what things are, how they work and what to do with them. Objects can allow a child to represent or express feelings, concerns or preoccupying interests. Objects are channels for social

interaction. They facilitate exploration, familiarisation and eventual understanding. For example, playing with dolls. (*Sensorimotor; symbolic*).

3. **Play as language:** For example nursery rhymes or fantasy stories. (*Other authors have not identified this type*).
4. **Play with social materials:** e.g. playing 'house' or 'cops and robbers.' (*Symbolic*).
5. **Play with rules:** e.g. 'Drop the Handkerchief or Capture the Flag' (p.104, Garvey, 1990). (*Games with rules*).
6. **Ritualised play:** This is play based on any resource, motion, object play, language, social conventions, and games with rules. It is defined by controlled repetition e.g. repeating pouring tea in a cup. (*Other authors have not specifically identified this type*).

Although Garvey's types of play are useful in defining what a child is doing, the types may overlap. Therefore it is questionable how useful it is to categorise play into types. For example, a group of children playing a skipping/ chanting game would be play with motion, play as language and play with rules. In addition the types do not give any indication why the child is engaged in that form of play and what the function of it is. For example, play with objects includes a range of different objects and reasons for playing. Playing with cars could indicate that the child is exploring motion, is reliving a memory, that they want to go out, or that the cars symbolise an emotion. How the child is playing with the object may be more significant.

Jennings (1993) describes three developmental stages of play, which also overlap with Piagetian and Garvey's ideas. Jennings outlines the following (links in italics):

- 1. Embodiment play:** Most prominent during the first year. Involves a sensory experience, including the whole body and parts. The baby is involved in explorations of the senses. Then he or she begins to explore objects, materials and toys outside his/her self. *(Play with objects; sensorimotor)*.
- 2. Projective play:** Experiences are projected out into various toys and media. The child learns the boundaries of his/her body. He/she expands his/her external world and develops the capacity to symbolise through use of transitional objects. Media (e.g. sand, water) also heighten the sensory experience. Toys are given roles and relationships and the child controls outcome. *(Play with objects; symbolic play)*.
- 3. Role:** The child takes on roles or characters and moves through different roles. The child integrates the role and creates the story or directs the drama. The child also identifies with another and develops his or her own identity. *(Play with social materials; fantasy; symbolic play. However other authors have not differentiated role-play as a separate type)*.

Jennings (1993) identified these play stages from her own observations of play and work as a drama therapist. There is no empirical evidence to support these stages. However, Jennings' model is useful as it gives some indication of the developmental stages of play, without stating fixed ages. She also highlights role-play as a distinct type, which is not mentioned by many authors.

Singer (1994) also suggested that there are three stages of play. These overlap with the Piagetian stages of play and with other authors already described. The stages are outlined below, with suggestions on how they may overlap.

Table 1: Singer’s Stages of Play

Stages of Play		Overlap
Stage I 0-2 years	Imitation 1. Use of reflexes 2. Repetition of sounds and movements 3. Beginnings of symbolic imitation Practice and Mastery 1. Sensory play- tasting, smelling, making sounds 2. Ritualistic play 3. Simple make-believe	Imitation Piaget (sensorimotor) Jennings (embodiment) Garvey (motion and interaction) Practice and Mastery Piaget (sensorimotor) Garvey (play with objects)
Stage II 2-5 years	Symbolic Play 1. Play that distorts reality; pretend, pure assimilation 2. Implies representation of absent object 3. Parallel play 4. Compensatory play	Symbolic Play Piaget (symbolic) Jennings (projective)
Stage III 7+ years	Games with rules 1. Institutional, hide and seek, hopscotch 2. Board games	Games with rules Piaget (games with rules) Garvey (play with rules)

Singer’s stages of play are based on a review of play literature and on his own observations (Singer and Singer, 1990). It is not evident how he arrived at the stages of play and the stages can be criticised for being rigid. However, Singer’s proposals are useful, as the stages include detail about the type of play that is found in children of that age. Although Singer’s stages are similar to Piaget’s model, they seem to be easier to identify as they are broken down in to sub-categories.

Pellegrini and Smith (1998) describe three forms of play, which are presented below:

1. Exploration: Children explore their environment, rather than play with it.

‘Exploration is an information-gathering venture and is evidenced, in its earliest form, by mouthing and simple manipulations of objects’ (p.52, Pellegrini and Smith, 1998). Exploration occurs particularly in the first 9 months of the infants’ life. By 18 months play with the environment occurs rather than exploration. This type is similar to Jennings’ embodiment stage, Singer’s practice and mastery and Piaget’s sensorimotor stage of development. However, unlike Piaget, Pellegrini and Smith suggest that exploration precedes play, meaning that ‘children of all ages must explore an object, or know its properties, before they can play with it’ (p.52, Pellegrini and Smith, 1998). In addition, they are more flexible than Piaget in describing the age that exploration begins.

2. Fantasy Play: Fantasy begins during the second year of life and becomes more sophisticated from 3 years of age onwards. Fantasy involves “as if...” orientation to the world and involves actions, use of objects and verbalisations with nonliteral meanings’ (p.52, Pellegrini and Smith, 1998). It often involves children playing pretend roles such as mummy, doctor, nurse. This form of play is similar to the Piagetian and Singer’s symbolic stages. Again, unlike Piaget and Singer, Pellegrini and Smith do not specify fixed ages for moving on from this type of play. It may also be linked to Garvey’s play with objects and play with social materials, and Jennings projective play and role-play.

3. Locomotor Play: This is play that is physical, for example, chase, climbing, skipping. Pellegrini and Smith suggest children engage in this form of play from 3-4 years old. Again they indicate flexible ages for the occurrence of locomotor play, peaking in late childhood and declining in early adolescence. Piaget's games with rules could be included in this form of play, i.e. skipping games and chase follow certain rules. This category could incorporate play with motion and interaction, and play with objects (Garvey, 1990), embodiment play (Jennings, 1993), and imitation play (Singer, 1994).

The forms described have much in common with Piaget and Jennings' stages. However, Pellegrini and Smith (1998) make some distinctions and provide a useful way to think about play. Like Garvey, their model acknowledges that motor play (locomotor) can occur later on in childhood, rather than only in the first few years of life as in Jennings' and Piaget's stages. In addition, they point out the difference between exploring the environment and playing with it. They state that play is guided by the question 'What can I do with?' rather than 'What can it do?' which would constitute exploration (p.52, Pellegrini and Smith, 1998). Pellegrini and Smith continue to say that play occurs, rather than exploration, after about 18 months. However, children of all ages may ask 'what does this do?' when confronted with a new toy, or unusual object. It is not clear if this would be play or exploration.

Pellegrini and Smith (1998) have not based their forms of play on any empirical evidence. Furthermore, they themselves suggest that there is a need for more

descriptive studies of children's play, to explore the forms of play, durations of play and location.

Sheridan's (1999) differentiation of types of play overlaps with the stages and types that have been identified by the authors above. Although it might be argued that Sheridan does not add anything new to the discussion, she seems to include all the types that other authors have identified, with the exception of play as language (Garvey, 1990) and possibly role-play (Jennings, 1993). However, the latter type of play could be included in Sheridan's imitative play or pretend play. Therefore it may be suggested that Sheridan provides the most useful and comprehensive categorisation of the play types.

Sheridan's types of play are presented in the table below, with comments on areas of similarity.

Table2: Sheridan's Types of Play

Type	Description	Similarities
Active Play	Involves using all limbs. Important for physical development	Sensorimotor (Piaget) Locomotor (Pellegrini and Smith) Embodiment (Jennings)
Explorative and Manipulative Play	Starts from about 3 months. Child explores environment, finding out about properties of objects through senses	Sensorimotor (Piaget) Exploration (Pellegrini and Smith)
Imitative Play	Child copies actions they see repeatedly performed by others. Important feature of social, cognitive and symbolic development	Sensorimotor/ practice play (Piaget) Imitation (Singer)
Constructive Play	Child creates something. Requires combination of fine movements, sensory capacity, cognitive and symbolic understanding	Sensorimotor and symbolic (Piaget)
Pretend Play	Child invents make-believe situation/ Child has the opportunity to put insights and skills into action. Dependent on use of imagination and creativity	Symbolic (Piaget) Fantasy (Pellegrini and Smith) Role-play (Jennings)
Games with Rules	Starts at about 4 years old. Child must have degree of understanding about sharing, taking turns, fair play and accurate recording of results.	Games with rules (Piaget) Games with rules (Singer) Play with rules (Garvey)

Sheridan's descriptions of types of play were constructed by observing the behaviour of children in real-life situations. The model therefore lacks empirical support, as it is based on subjective observations. Nevertheless, Sheridan provides a useful and comprehensive list of the different types.

Functional play has been identified as a type of play, particularly in the literature on autism (Williams, 2003; Fenson et al., 1976; Belsky and Most, 1981). Williams (2003) writes that at the end of the first year, children begin to put

objects together in socially appropriate ways that increasingly reflect their functional properties. At around 13-15 months, children start to engage in functional play. Williams defines this as ‘using an object in accordance with its socially designated function, for example pushing a toy car along the ground’ (p.364, Williams, 2003). Functional play seems to have similarities with sensorimotor and explorative play (Piaget, 1962; Pellegrini and Smith, 1998; Sheridan, 1999), play with objects (Garvey, 1990), and embodiment play (Jennings, 1993).

3.4 Summary of Types and Stages of Play

Ideas linking different theories of types or stages of play are shown diagrammatically in Table 3.

Vygotsky (1967) proposed that all play has rules, whereas others (Piaget, 1962; Garvey, 1990; Sheridan, 1999) describe games with rules as one type of play. Most theorists identify a type of exploratory play, sensorimotor play and symbolic play or pretend play. In addition, Garvey (1990) identified play as language and ritualised play and Jennings (1993) suggested role-play as a distinct type.

Table 3: Summary of the Different Ideas about Stages or Types of Play

Type/ Stage of Play	Author	Authors Type/ Stage
1. Exploration	a) Jennings (1993) b) Singer (1994) c) Pellegrini and Smith (1998) d) Sheridan (1999) e) Williams (2003)	a) Embodiment play b) Imitation c) Exploration d) Active play Explorative and manipulative play e) Functional play
2. Sensorimotor	a) Piaget (1962) b) Garvey (1990) c) Jennings (1993) d) Singer (1994) e) Pellegrini and Smith (1998) f) Sheridan (1999) g) Williams (2003)	a) Sensorimotor b) Play with objects Play with motion and interaction c) Embodiment d) Imitation Practice and mastery e) Locomotor Exploration f) Active play Explorative and manipulative play Imitative play g) Functional play
3. Symbolic	a) Piaget (1962) b) Garvey (1990) c) Jennings (1993) d) Singer (1994) e) Pellegrini and Smith (1998) f) Sheridan (1999)	a) Symbolic play b) Play with objects Play with social materials c) Projective play Role d) Symbolic play e) Fantasy play f) Constructive play Pretend play Imitative play
4. Games with Rules	a) Piaget (1962) b) Vygotsky (1967) c) Garvey (1990) d) Singer (1994) e) Sheridan (1999)	a) Games with rules b) All play has rules c) Play with rules d) Games with rules e) Games with rules
5. Play as Language	a) Garvey (1990)	a) Play as language
6. Ritualised Play	a) Garvey (1990) b) Singer (1994)	a) Ritualised play b) Ritualistic play
7. Role play	a) Jennings (1993)	a) Role

4. Theories About the Functions of Play

There are many different theories about the functions of play and some of these theories will be explored in more detail below. In addition, suggestions on how these theories can be integrated will be made.

4.1 Instinct and Wish-fulfilment

Groos (1901, in Cattanach, 1992) suggested that play is instinctual and is inherently part of a person's personality and behaviour. To some extent, Vygotsky's (1967) ideas overlap with this early suggestion by expanding the idea of play as an instinct. He argued that play is a consequence of the child's needs, inclinations, incentives and motives to act.

Vygotsky (1967) suggests that as children develop from one stage to another there is a change in their motivation to act. As children's needs and incentives develop, so do tendencies and desires that cannot be realised. Vygotsky argues that play occurs when these unrealisable tendencies become part of development. The need for immediate fulfilment of desires also becomes apparent i.e. a preschool child's need for immediate gratification is evident. A child over three years old may have conflicting tendencies, in that they cannot have their needs fulfilled at once, but the desires and tendencies cannot be ignored. In accord with Vygotsky's theory, play therefore 'must be interpreted as the imaginary, illusory realisation of unrealisable desires' (p.7-8, Vygotsky, 1967).

Vygotsky (1967) suggests that play is a wish fulfilment, although children do not realise the motives of the play activity. It could be argued that Vygotsky's

theories about acting out or acting through unconscious desires and tendencies are similar to Freud's (1913) ideas on the function of dreams.

4.2 Enhancing Development

Vygotsky (1967) also suggested that play is 'imagination in action' (p.8, Vygotsky, 1967), which links to Bruner's (1976; 1990) theories about play. Both Vygotsky and Bruner suggest that play encourages creative or imaginative development. They also view play as a significant activity needed for other types of development. Bruner focused on children needing play for social and intellectual development, whereas Vygotsky proposed that play enables children to develop cognitively, by helping them to distinguish between object and meaning. If you say to a young child 'clock,' the child will start looking for the clock, as the meaning of the word and the object are the same for him/her.

However, play allows children to distinguish between the actual object and the meaning of word. For example, when a stick is used as a horse, thought is separated from the object. Play activity is determined by the idea of a horse rather than a real horse. Young children find it difficult to distinguish thought from object, so the stick becomes a 'pivot,' which allows the child to separate the meaning from the concrete representation. Play enhances concept development and symbolic use.

Vygotsky (1967) describes that as children develop, they begin to act independently of what they see. Behaviour is not always expressed, it is conceived on imagined levels and in imaginary situations. This teaches children

to guide their behaviour not only by immediate perception of objects or the situation immediately affecting them, but also by the meaning of this situation. It follows that children learn how to act and behave in certain situations. This suggestion is similar to that of Bruner (1976; 1990) i.e. that play promotes social and cognitive development.

Although Vygotsky's theories provide a useful starting point when thinking about the function of play, they do not provide sufficient detail about different types of play and how types link with theory. For example, whether re-enactments are examples of children's imagination and how re-enactments can be best understood in terms of promoting development. Further, there is an absence of empirical evidence to support his theories.

Singer's (1994) ideas extend these earlier observations about the developmental functions of play. Singer (1994) considers the benefits of play, which are outlined below. Each benefit may be categorised further in developmental terms; these are outlined in italics.

1. Motor skills developed (*Motor Development*)
2. Senses sharpened (*Sensorimotor Development*)
3. Expression of emotions- empathy (*Emotional Development*)
4. Delay of gratification (*Social and Emotional Development*)
5. Role taking (*Social Development*)
6. Sharing, turn taking- harmony (*Social Development*)
7. Ordering, sequencing (*Cognitive Development*)

8. Vocabulary growth (*Cognitive Development*)
9. Concentration increased (*Cognitive Development*)
10. Flexibility (*Cognitive Development*)
11. Expansion of imagination and creativity (*Cognitive and Creative Development*)

Singer's model is useful because it can be used to expand upon the idea that play is necessary for development. Although Singer does not categorise them in developmental terms, he identified benefits that can be categorised into motor, cognitive, creative, social and emotional development. This is a step further than Bruner and Vygotsky's ideas of development, as there are also examples of social, motor and emotional development.

4.3 Safeguarding from Consequences/ Safety

Bruner (1990) emphasised that play allows children to act out situations and to express emotions in a way that enables them to be cushioned from consequences. Play is described as something that is safe, which allows children to explore situations and feelings with no repercussions.

McMahon (1992) is a theorist and play therapist, whose ideas echo these suggestions. McMahon reports that play is a 'spontaneous and active process in which thinking, feeling and doing can flourish, since they are separated from fear of failure or disastrous consequences' (p.1, McMahon, 1992). In accord with Bruner, she notes that errors do not have serious consequences. The child can explore a potentially frightening world, without being harmed. This idea was

similarly emphasised by Winnicott (1971), who also suggested that play allows the child to experiment within safe boundaries.

McMahon proposes that play is a way of assimilating new information and making it part of ourselves. She says that in the process of play, children can change their view of the world and of their self. These ideas link with Cattanach's (1992) perspective, namely that play allows the child to imagine different possibilities and other ways of being. In addition, in accord with McMahon, Cattanach suggested that play gives the opportunity for the child to explore the world safely, to make sense of it and to find his/her place in that world.

McMahon (1992) and Cattanach (1992) seem to be suggesting that children can rehearse situations and ways of being, in order to practice for real life. Erikson (1963) proposed earlier that by re-enacting and repeating, children are able to express anger and aggression safely, without harming themselves or others.

Trying out new behaviours and ways of being through play, allows the child to rehearse and practice for real life, thereby enhancing social and cognitive development.

4.4 Relief of Tension/ Expressing Emotions and Mastery

Winnicott (1971) also argued that play is essential for social, emotional and intellectual development. However, Winnicott (1971) suggested that the most important function of play is to relieve anxiety and it is this that facilitates

development. He said that play is a way of coping with the anxiety when an infant realises that it has a separate existence from its mother and is not omnipotent. Play therefore bridges the gap between the child's inner experience and the reality of the outside world. As the infant explores real objects and people, it achieves its first sense of autonomy and mastery. This echoes Erikson's (1963) views on linking the inner and the real world.

Erikson (1963) and Bruner (1976; 1990) agree that play enables children to express emotions, which can relieve anxiety. Erikson thought that this allows children to cope with the real events giving them mastery over the situation.

These ideas are similar to Singer's (1994), who suggested that make-believe play allows children to express emotions of fear, anger, distress and joy. Through play, children learn to gain control over emotions and to feel in control of themselves.

More recently, Landreth (2001) stated that play is a child's way of working out accompanying feelings of anxiety and fear and establishing a sense of control in his/her life. He gives the example of a child in a hospital, who might play out the events of that experience with the use of dolls. He suggests that this enables the child to feel more control about hospital procedures and to master his/her anxiety. This echoes Singer's (1994) ideas about play allowing the child to gain control over negative emotions.

Play that is re-enactment, such as that suggested by Bruner (1990) and Erikson (1963) may be included here, with children re-enacting events to enable them to cope, to gain control or to express their emotions.

4.5 Reality-Fantasy

Finally, the reality-fantasy function of play can be traced to Erikson (1963), who stated that the importance of play lies in its ability to link the real world and the inner mental world of the child. The child both imagines and practices being in control in ‘an intermediate reality between phantasy and actuality’ (p.212, Erikson, 1963). Winnicott (1971) also suggested that play enables the child to distinguish between their inner experience and the real world.

4.6 Summary of the Theories about the Functions of Play

There are clearly some similarities and overlaps between different theories of play. A summary is presented diagrammatically in Table 4.

Table 4: Summary of the Different Theories about the Functions of Play

Function	Function of Play	Author
Instinct/ Wishfulfillment	1. Play is an instinct 2. Wish fulfilment- function of dreams 3. Wish fulfilment	1. Groos (1901) 2. Freud (1913) 3. Vygotsky (1967)
Enhancing Development	1. Development of meaning Cognitive, creative development 2. Cognitive, creative, social development 3. Assimilation of new information 4. Trying out new ways of being 5. Cognitive, creative, motor, social, emotional development	1. Vygotsky (1967) 2. Bruner (1976; 1990) 3. McMahon (1992) 4. Cattanach (1992) 5. Singer (1994)
Safeguarding from consequences/ Safety	1. Try out new experiences, Buffered from consequences 2. Safe experience 3. Safe experience/ separate from fear of disastrous consequences 4. Try out different ways of being in safe way	1. Bruner (1976; 1990) 2. Erikson (1963) 3. McMahon (1992) 4. Cattanach (1992)
Relief of Tension/ Expressing Emotions and Mastery	1. Expressing emotions 2. Expressing emotions, relief of tension 3. Relieves anxiety, bridges gap between inner and outer worlds 4. Expressing emotions, control over negative emotions 5. Relieves anxiety, feel more in control	1. Bruner (1976; 1990) 2. Erikson (1963) 3. Winnicott (1971) 4. Singer (1994) 5. Landreth (2001)
Reality/ Fantasy	1. Links real and inner world, between fantasy and reality 2. Bridges gap between inner and outer worlds	1. Erikson (1963) 2. Winnicott (1971)

There is consensus about the most important reasons for children to engage in play. There is no question that play enhances children's development (e.g. Vygotsky, 1967; Winnicott, 1971; Bruner, 1990; McMahon, 1992; Cattanach, 1992; Singer, 1994; Landreth, 2001). Play also gives the child the opportunity to explore, try out new ideas and possibilities, in a safe environment, without serious consequences (e.g. Erikson, 1963; Winnicott, 1971; Bruner, 1990; Cattanach, 1992; McMahon, 1992).

Trying out new ways of being enables the child to express negative affect safely. Play may relieve anxiety and tension (Landreth, 2001; Winnicott, 1971). The child can make errors and rehearse (e.g. Erikson, 1963; Vygotsky, 1967; Winnicott, 1971; Cattanach, 1992; Bruner, 1990; Singer, 1994). Play links the inner mental world with reality and allows the child to cope with the real world (Erikson, 1963; Winnicott, 1971; Landreth, 2001).

Most of these theories are not empirically tested; but rather are based on experience and informal observations of children's play.

5. Connecting Theories of Play to Types and Stages of Play

5.1 Why Connect Them?

From the literature, categorising play in terms of different stages or types does not enable us to decipher the function of that form of play. Furthermore, thinking solely about functions of play does not take account of the specific types of play that facilitate that function.

Sometimes play demonstrated by children appears to be disordered and in order to understand clinical presentation better it may be useful to amalgamate the different functions and reasons for play and then map the various stages and types of play on to functional descriptions. This would enable us to generate ideas about aspects of play that encompasses both the functions and types of play. This would take into account different concepts of play and it may be helpful in the assessment of children's play.

5.2 Developmental Aspects of Play

One of the major functions of play is clearly to aid a child's development (e.g. Vygotsky, 1967; Winnicott, 1971; Bruner, 1990; Singer, 1994; Landreth, 2001). It could even be argued that all of the functions of play described above may be included under a broad developmental heading. Play may be viewed as a rehearsal for life, enhancing most types of development. Play provides the opportunity to develop sensorimotor, social, cognitive, communicative, creative and emotional skills.

These developmental aspects may provide a classification system for play. This idea is discussed below and a summary is presented in Table 5. The various stages and types of play that have been reviewed are incorporated.

Table 5: Summary Combining Function and Types or Stages of Play

	Proposed Function of Play	Type of Play	Associated Theorist
1	Sensorimotor Development	a) Sensorimotor b) Play with motion & interaction, Play with objects c) Embodiment play d) Imitation, Practice and Mastery e) Exploration, Locomotor f) Active play, Explorative and Manipulative, Constructive play g) Functional play	a) Piaget b) Garvey c) Jennings d) Singer e) Pellegrini and Smith f) Sheridan g) Williams
2	Cognitive Development	a) Play/ games with rules b) Making sense of world c) Functional play	a) Vygotsky; Garvey; Sheridan; Singer; Piaget b) Erikson; Cattnach c) Williams
3	Socio- communicative Development	a) Play with objects, Play as language, Play with social materials b) Role-play c) Play/ games with rules d) Symbolic/ fantasy/ pretend play e) Imitative play f) Practice and mastery g) Different way of being h) Functional play	a) Garvey b) Jennings c) Piaget; Vygotsky; Garvey; Singer; Sheridan d) Piaget; Singer; Pellegrini and Smith; Sheridan e) Sheridan; Singer f) Singer g) Cattnach h) Williams
4	Imaginative/ Creative Development	a) Exploratory play b) Symbolic/ fantasy/ pretend play c) Role-play d) Play with objects e) Exploring the world f) Trying out new experiences g) Linking inner and real worlds	a) Sheridan; Pellegrini and Smith b) Piaget; Singer; Pellegrini and Smith; Sheridan c) Jennings d) Garvey e) Cattnach f) Bruner g) Erikson
5	Emotional Development	a) Expressing emotions, b) Cathartic c) Managing emotions d) Relief of tension/ anxiety e) Symbolic/ fantasy/ pretend play f) Imitative play g) Exploratory play h) Games with rules i) Wish fulfilment	a) Erikson; Winnicott; Bruner; Singer; McMahon; Landreth b) Jennings c) Bruner; Singer; Landreth d) Winnicott; Landreth e) Piaget; Singer, Pellegrini and Smith; Sheridan f) Sheridan; Singer g) Pellegrini and Smith; Sheridan h) Vygotsky; Piaget; Garvey; Singer; Sheridan i) Vygotsky

5.2.1 Sensorimotor Development may be enhanced by sensory play i.e. play involving the senses. Motor play and sensorimotor play are also included e.g. jumping and skipping, and squeezing and stroking respectively. See Table 5 for some of the range of descriptions of these types of play.

5.2.2 Cognitive Development may be facilitated by play/ games with rules (Vygotsky, 1967; Garvey, 1990; Sheridan, 1999; Singer, 1994; Piaget, 1962) and also making sense of the world (Cattanach, 1992; Erikson 1963). When playing games with rules, children are enhancing their cognitive abilities, for example planning skills and developing knowledge. Through play, children are learning their place in the world, assimilating new information about the world and themselves. Children are linking their inner world with information from the outer world. They develop understanding e.g. in functional play (Williams, 2003) children learn the functions of objects.

5.2.3 Socio-Communicative Development may be enhanced by play with people, games/play with rules, and play as communication. It includes play with social materials (Garvey, 1990), i.e. play with characters or people in which children take on roles, and also play with language. There is evidence to suggest that there is a complex relationship between play and language. Lewis (2003) suggests that they are related because specific developments emerge first in play and then subsequently in language.

Role-play and games with rules are forms of social and communicative development. Children develop skills in communicating with others, turn taking,

discussing ideas and options and co-operating. Symbolic/fantasy and pretend play provide other important opportunities for social and communicative development e.g. when children are pretending to do something or be someone. Singer's descriptions of practice, mastery and imitation, as well as Sheridan's accounts of imitative and pretend play contribute to socio-communicative development. Here children develop social rules and learn acceptable ways of behaving by observing others and imitating behaviour, by playing at pretend scenarios.

Use of play as a way of exploring differing ways of being, as described by Cattanach (1992), could be identified as promoting social development. Children learn how to interact with people and ways of communicating and behaving. Functional play could also enhance social development. Williams (2003) suggests that children learn socially appropriate roles by learning the object's functional properties i.e. child puts a pan on a toy cooker

5.2.4 Imaginative/Creative Development is enhanced by exploratory play (Pellegrini and Smith, 1998; Sheridan, 1999), symbolic/ fantasy and pretend play (Piaget, 1962; Singer, 1994; Pellegrini and Smith, 1998; Sheridan, 1999), role-play (Jennings, 1993) and play with objects (Garvey, 1990). Exploring the world (Cattanach, 1992), trying out new experiences (Bruner, 1976) and forming links between the child's inner and real world (Erikson, 1963) also develop creative and imaginative skills.

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5.2.5 Emotional Development occurs with play that allows children to learn about emotions and what is and what is not acceptable. Children are able to practice emotions in a safe environment and are buffered from consequences. For example, if a child is pretending to be a teacher and they practice becoming angry and telling another child off, the child may be starting to make sense of the feeling of anger but in a safe environment, where there are no consequences. This category could include many types and stages of play, depending on content (see Table 5).

Play may be cathartic for children and also be a way of displacing emotions on to other objects or people e.g. projective play (Jennings, 1993). Emotions may be expressed through role-play, imitative play, exploratory play, symbolic play and games with rules. For example, the child may play at being angry or upset in a role-play.

Expressing emotions during play, may be a way of reducing anxiety and tension, as suggested by Winnicott (1971) and Landreth (2001). In addition, expressing emotions through play may represent wish fulfilment. For example, the child may play that a parent takes them out.

Play may allow children to manage their emotions (Bruner, 1976; Singer, 1994; Landreth, 2001). Symbolic/pretend play, role-play and games with rules all contribute to this. For example, if a child plays at going to hospital before the real event, it may allow the child to feel they have some control over the process.

Managing emotions may be a separate function of play. Emotional development could be differentiated from emotional management, since in the former the child is learning to recognise emotions and discovering forms of expression. In the latter, the child may be expressing emotions for a cathartic reason. However, it may be argued that managing emotions is a continuation or an advanced form of emotional development.

5.3 Summary of the Classification System of Play

Suggestions about developmental aspects of play have been proposed. This may provide a way of classifying play, which amalgamates functions and types of play. The idea postulated is that play can be classified into a range of behaviour domains, which may enhance or facilitate a child's development namely: sensorimotor, cognitive, socio-communicative, imaginative/creative and emotional development. Each of these benefits of play has been described, with suggestions of the type or function included in that category.

6. Critique of Literature

The literature reviewed does not have a strong evidence base and is largely grounded in the observations and clinical practice of the various authors. It has not generally been empirically validated. Yet, aspects of play skills are included in assessment of clinical conditions therefore, further empirical assessment is warranted.

The suggestions about using the developmental aspects of play to classify play can be criticised, as they are not specifically based on empirical evidence. They were developed by examining different ideas about the types and theories of play and then amalgamating them. Interpretations of the function of play may depend on theoretical orientation. However, the classification system of play has the advantages of simplicity and parsimony and seems to incorporate all aspects of observed play.

7. Implications

7.1 Clinical Implications

The behavioural functions served by play, which have been identified, could provide a way of classifying play. It may enable clinicians to identify developmental aspects in children's play, which would be useful in assessing a child's developmental abilities. If criteria for the developmental aspects are generated and validated, the classification system may also provide age-related norms on which to base assessments. Again this would be helpful when assessing a child's development and abilities.

Disordered play is sometimes seen as part of a wider clinical picture. For example, children with autism have impaired play skills. Often lacking the skills at imaginary play and engaging in repetitive actions with toys and not using toys in the way they were intended (APA, 1994). In addition children who have suffered trauma may develop repetitive aspects to their play (APA, 1994; Terr, 1981; 1988). A classification system with age-related norms may help in the identification of such clinical problems.

7.2 Research Implications

In order for the classification system to be a valid assessment tool, empirical research is required. More evidence is needed to support the existence of these developmental aspects and to discover whether they can be used to firstly classify play and secondly develop age-related norms. This could be carried out by conducting observations of children's play.

8. Conclusions

This review has examined different theories about types, stages and functions of play. An attempt has been made to identify the behavioural domains of play, which incorporate developmental function, types and stages. The domains could provide a classification system of play, which could be used in the assessment of children's play. However, further research is required to assess whether it is indeed helpful for clinicians to categorise play in such a way.

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Chapter Two: Main Paper -
The Occurrence of Developmental Domains of Play Using
The Make a World Technique

Word Count: 6,989

The Occurrence of Developmental Domains of Play Using The Make a World Technique

Abstract

From a review of the play literature, Fletcher et al., (2004) proposed that play can be classified into five domains of development, namely, sensorimotor, cognitive, socio-communicative, imaginative/ creative and emotional. This study attempts to empirically explore the existence and occurrence of these domains. 13 children were observed playing, and following the Lowenfeld Technique, the children were invited to 'make a world' in a sand pit (Lowenfeld, 1950). Observations were video-recorded and data were analysed for the occurrence of these five domains of play, as measured by duration of time. Results suggested that the five domains could be observed and that the children in this sample spent statistically more time in sensorimotor and imaginative/ creative play than in the other types of play. There were no differences between girls and boys play in terms of time spent in each domain. It may be useful to categorise play in this way and the domains could provide information for clinicians about a child's developmental capabilities. The clinical implications and suggestions for future research are discussed.

Key Words: Children; Development; Lowenfeld Technique; Play.

1. Introduction

The aim of the study is to use the ‘Make a World Technique’ (Lowenfeld, 1950) to explore the existence and occurrence of the five domains of play that were proposed from a review of the play literature (Fletcher, Cushway, Knibbs, 2004).

Firstly, the domains of play will be described. A definition of play will also be given and currently available assessments of play will be reviewed. An observational study using a standard assessment will then be presented.

1.1 Background

Fletcher et al., (2004) reviewed play literature on the types and functions of play, and proposed that play can usefully be classified into five domains of child development. A definition of each developmental domain is presented below:

- 1. Sensorimotor Development-** Play that enhances sensory development and motor skills. This includes movement and the senses of sight, touch, hearing, taste and smell. For example, squeezing a toy and skipping.
- 2. Cognitive Development-** Play that promotes cognitive abilities. This includes play that involves the child making sense of the world, acquiring knowledge and learning skills such as planning and problem solving. For example, board games, role-play, and question and answer games.
- 3. Socio-Communicative Development-** Play that enhances social learning and communication. This involves the child learning social skills, verbal

and non-verbal skills, communication skills, turn taking, discussing ideas and co-operation, for example, games with other children and role-play.

4. **Imaginative/ Creative Development-** Play that enhances imagination and creative abilities, either alone or with others. For example, role-play and pretend play.
5. **Emotional Development-** Play that develops children's abilities to express and manage emotions. It includes the child learning about different emotions and what is and what is not acceptable. In addition, these types of play allow the child to practice expressing and managing emotions, via for example, pretend play and role-play.

1.2 Definitions of Play

McCune-Nicolich and Fenson (1984, in Schaefer, Gitlin and Sandgrund, 1991) describe play as '(a) pursued for its own sake; (b) focused on means rather than ends; (c) directed toward exploring objects; (d) not considered a serious endeavour as no realistic result (i.e. no external purpose with a required outcome) could be expected; (e) not governed by external rules; and (f) characterized by active engagement of the player' (p.4, Schaefer et al., 1991). Garvey (1990) and Piaget (1962) additionally define play as being (a) pleasurable (having a positive value to those involved); (b) spontaneous, voluntary, intrinsically motivated; (c) flexible; and (d) a natural product of physical and cognitive growth. For the purpose of the study these definitions of play will be used.

1.3 Assessments of Play

Assessment of play is important as it may contribute to a clinical assessment and help to develop the clinicians understanding of a child's development. However, there is not a systematic review of play assessments reported in the literature. It would be useful here to review existing assessments, in order to consider which are valid, reliable and clinically accessible. This summary will describe various assessment methods.

1.3.1 The Assessment Setting

Assessments may be carried out with individual children, playing alone or with peers. They can be conducted in the classroom, in the playground, at home or in clinical settings. Information may also be gathered by asking parents/carers, teachers or clinicians to complete checklists about the child.

Observations of play may be conducted in natural habitats, for example classrooms and homes (e.g. Pellegrini, 2001; Hadeed and Sylva, 1999), or in contrived settings such as experimental playrooms. Contrived settings have the benefits of allowing the experimenter to control and manipulate variables and tend to be less time consuming (Lytton, 1973, in Schaefer et al., 1991). However, these settings may also inhibit children's expression and competence. In addition, critics of contrived settings often state that the results do not generalise to other settings, thus lacking external validity.

Observations in the classroom, playground and home also have benefits and costs. In these settings, children are observed where they choose to be, they exhibit competencies that they choose to demonstrate and they self-select certain contexts, particularly during free play periods. This may be advantageous, but there are other contextual variables to consider. For example, the toys and peers they play with will influence the types of play they exhibit. Pellegrini (2001) notes that children's play is related to playmates' status and to their preference for props.

There are ways to increase reliability in the assessment of play. One could observe children's play behaviours across a wide variety of play environments. Alternatively, observations could be conducted only when children are in a specified location. Limited, but specific inferences may then be made. Whatever the location, it may be necessary to observe children a number of times in each context (Pellegrini, 2001). Specific assessment methods will now be considered.

1.3.2 Questionnaire Measures

Questionnaires have been used to explore children's play. For example, Saylor, Swenson and Powell (1992), devised a questionnaire pack to explore parental descriptions of children's play. They sent out questionnaires to parents of 632 children, living in South Carolina, 6 weeks after Hurricane Hugo struck the South Carolina Coast. Parents were asked to write observations of conversations and play behaviour that related to the hurricane. This method of exploring

children's play is clearly limited. Parents are asked to make observations, which may be idiosyncratic and parents may assume that play behaviours are linked to the hurricane, because of its explicit mention. In addition, Saylor et al., (1992) do not focus on types of play. One difficulty with using a checklist is that the person completing it does need an understanding of the topic (Pellegrini, 2001).

1.3.3 Observational Measures- Free Play with Peers

Assessments are often carried out through observations of children playing with peers. Both Piaget (1970, in Pellegrini, 2001) and Vygotsky (1978, in Pellegrini, 2001) point out that play with peers requires a high level of socio-cognitive sophistication. Pellegrini (2001) suggested that in order to engage successfully in play with peers, children must be able to take the perspective of the other and often use a sophisticated form of explicit oral language in order to communicate. Pellegrini (2001) proposed that the dimensions of children's social play could be developed into an observational instrument or teacher/ parent/ clinician checklist to assess social cognitive competence. For example, parents could be asked about different roles that children play with peers and what themes are present.

Pellegrini (2001) presents two instruments, which he used to observe children for assessment. The first is the play matrix, which was developed by Rubin, Fein and Vandenberg (1983, in Pellegrini and Smith, 1998). The matrix considers cognitive and social aspects of children's behaviour. Cognitive dimensions include functional play, constructive play and symbolic play. Functional play

refers to instances where children are manipulating an object to determine its properties and what it does. Constructive play refers to behaviours where the goal is to build something. Symbolic play is when one object represents something else. The social dimensions of play described here are: a) solitary play, where a child is not interacting with anyone; b) parallel behaviour, where two or more individuals are involved in the same task, but are not interacting with each other, and c) interactive behaviour, where two or more individuals are engaging in mutual interaction. The observer uses the matrix by choosing one child to observe and coding his/her behaviour. Behaviours are recorded at the moment a signal, such as a beep from a timer, is emitted.

The matrix has been widely used by researchers and practitioners to measure indoor play of preschool children (Pellegrini, 2001). However, the matrix was not designed to conduct observations of outdoor play and primary school children. Therefore, Pellegrini (2001) developed an observational scheme for studying primary school children on the playground. He devised a list of playground behaviours, which can be sampled and recorded using the same rules as the matrix. These behaviours are passive/non-interactive; passive/interactive; adult directed; adult organised; aggressive; rough and tumble; vigorous behaviour; games; object play and role-play. There is a limited amount of research on this observational model and there are various reliability and validity issues, with regards to this scheme.

Hadeed and Sylva (1999) used behavioural observations as predictors of children's social and cognitive progress. They used the Target Child Observation Method (TCOM) to assess a child's behaviours and interactions. They compared the cognitive and social progress of children in educationally oriented day care with children in care-oriented provision or at home. They observed 120 children for 20 minutes each, using one-minute time samples. The TCOM has four codes to define observed behaviours. These are 1) Task engagement, which measures the amount of the child's participation in different activities; 2) Social context, which measures the child in settings such as being alone, in pairs, in a group, small group, large group, parallel; 3) Adult involvement, which measures different levels of staff involvement with the child; 4) Language, which records child and adult language interaction. The study reported high levels of reliability and validity, and provides sound evidence for the use of the TCOM to measure cognitive and social progress. The TCOM seems to be a useful method, although it does not measure emotional development.

1.3.4 Observational Measures- Free Play with Parents

The Play Observation Kit (POKIT) (Mogford-Bevan, 2002) is designed to systematically assess a child's development, by observing a child's spontaneous play in the interaction with parent/carer. It is suitable for children who are between 12 and 48 months and is intended to assess children when problems in development have been identified. It allows the assessment of developmental status and gives a summary of play characteristics. POKIT was derived from an

objective study of 58 normally developing children, aged between 8 and 54 months. Norms are referenced and reliability and validity are extensively discussed in the manual (Mogford-Bevan, 2002).

1.3.5 Observational Measures- Structured Play Observed by Clinician

Assessments can also be conducted through observations of structured play. Westby (1980, in Schaefer et al., 1991) devised a complex and comprehensive scale for assessing children's pretend play. It focuses on the play and communicative characteristics of children from 8 months to 5 years. The scale is broken down into eleven developmental levels and each level includes different dimensions. The two presymbolic levels include the dimensions of object permanence, means-ends problem solving and object use. Language in these levels is considered in terms of communication. The eight symbolic levels include the dimensions of decontextualisation, thematic content, integration or organisation of play themes and self-other relationships. In these levels, functions, form and content of language are also considered. The scale is used as a guide to decipher which level the child is at. The clinician observes the child playing with standard toys, then interprets the behaviours and evaluates the level. Westby (1991) provides some case examples of the clinical usage of the scale, but the scale is not validated or tested for reliability.

The Symbolic Play Test (SPT) assesses symbolic development in children of 12 months to 6 years (Lowe and Costello, 1976 in Schaefer et al., 1991; Lowe and

Costello, 1988, in Doswell et al., 1994). Four different groups of toys are presented and 'the child's behaviour is observed for various modes of play, including tactile exploratory, symbolic self-oriented usage, symbolic doll related usage and sequential symbolic representation' (p.89, Power and Radcliffe, 1991). The child is scored for each of the behaviours demonstrated, and these are recorded on the score sheet as they occur. The next set of toys is presented when it becomes clear that the child has exhausted the possibility of new combinations. The SPT was initially standardised on 137 children, which provided a set of norms. There were some problems with validity, but it had a high level of test-retest reliability.

Lewis, Boucher and Astell (1992) argue that the SPT measures functional play, i.e. the use of objects according to their functional use, as opposed to symbolic play; hence it measures ability to form concepts rather than ability to use symbols. Lewis et al., (1992) therefore developed the Warwick Symbolic Play Test (WSPT). They proposed that this test measures symbolic play ability in young children and that it could help in the assessment and diagnosis of children with language impairments and deficient play abilities. Doswell et al., (1994) conducted a study that provided validation data for the WSPT. The research involved administering the WSPT to 60 children, 30 girls and 30 boys, aged between 3.2 and 5.8 years. The study concluded that the WSPT is a 'useful measure of the developing symbolic play skills which are related to expressive and receptive language ability' (p.296, Doswell et al., 1994). The scores obtained

showed a significant relationship with expressive and receptive language scores, which provided evidence to support the concurrent validity of the WSPT. In addition the scores were found to increase with age, which confirms that the test is a valid measure of developing symbolic skills.

Westby's scale (1980), the SPT (Lowe and Costello, 1976, in Schaefer et al., 1991) and the WSPT (Lewis, et al., 1992) may be useful in evaluating children's level of symbolic functioning. However, according to the authors they focus specifically on symbolic play; they do not assess other types of play, e.g. sensorimotor or social/ communicative.

Another observational measure of structured play is The Affect in Play Scale (APS), developed by Russ (2004). This scale measures emotional expression in children's pretend play. It consists of a standardised play task and a criterion-based rating scale. Children are asked to play with two puppets and three small blocks for five minutes. Play is observed by video recorder and then scored. Three affect scores are obtained: total frequency of units of affective expression, variety of affect categories and mean intensity of affective expression. Organisation and elaboration of fantasy, imagination, overall quality of fantasy, comfort and affect integration are also scored. A number of validity studies have been carried out with four types of theoretically relevant criteria: creativity; coping and adjustment; emotional understanding; and interpersonal functioning (e.g. Russ and Schafer, 2002, in Russ, 2004; Goldstein, 2002, in Russ, 2004).

The studies provide support for the validation of the scale. In addition, inter-rater reliabilities in the studies were consistently good (e.g. Christiano and Russ, 1996, in Russ, 2004).

The APS seems to be a useful measure, focusing on specific aspects of play, namely emotional and some creative. There remain other features of play e.g. the cognitive and social learning aspects, which may require supplementary assessment.

Lowenfeld (1950) designed an instrument to measure the internal experiences of children and that allows repeated studies of play. The apparatus is aimed to give children the power to express their ideas and feelings, independent of skill and makes use of touch, sensation and sight. The Lowenfeld Make a World Technique comprises a tray, which is set on a table and filled with sand. Water may also be supplied. A cabinet of shelves is provided which contains different toys. The toys include a variety of people and objects e.g. people, houses, trees, fences, animals, transport. Lowenfeld proposes that the child is told he/she may do anything they like with the materials on the tray. These instructions have been adapted by other therapists, who invite the child to 'make a world in the sand tray, any kind of world you like, whatever comes into your head' (p.93, Newson, 1992).

Lowenfeld (1960) and Newson (1992) reported using The Make a World

Technique to help children to express themselves and to 'offer the child experience of being master over a situation' and over the therapist (p.106, Newson, 1992). Other therapists have become familiar with using this technique in therapy (e.g. Jennings, 1999; Toscani, 1998; Ryce-Menuhin, 1992).

However, The Make a World Technique has not been used systematically to categorise children's play. Observations of children's play in a non-clinical sample have not been documented.

1.4 Summary

There are different methods available for observing children's play. Some of these are used to observe play in the general child population; other methods are used to assess play in clinical samples. There is limited literature on applying dimensions of play to observations of children's play, particularly with a non-clinical sample.

2. Aims of the Present Study

The aim of the present study is to use The Make a World Technique to explore children's play. Fletcher et al., (2004) proposed that play can be classified into domains of behaviour which appear to enhance five different aspects of development. The Make a World Technique will be used here to observe children's play in a non-clinical sample, in order to explore the existence and occurrence of these domains, as measured by duration of time. In addition,

gender differences in play, in terms of the occurrence of these domains, will be explored. The Make a World Technique was chosen for the assessment method, as it was accessible and inexpensive compared to the other assessments discussed above.

3. Methodology

3.1 Design

The Make a World Technique (Lowenfeld, 1950) was used to observe children's play. Each child was observed for a time period of 15 minutes. The play was video recorded and the data were analysed.

3.2 Ethical Approval

Coventry University and North West Multi-centre Research Ethics Committee were contacted for ethical approval (appendix 2).

3.3 Participants

The method of sampling involved approaching 60 parents of children in two reception classes. The parents of 13 children opted in and all 13 children were observed. The sample of children included five girls and eight boys, with one of these boys serving as a pilot study. The children were aged 4-5 years old; the average age was 5 years 3 months. They attended a reception class in a market-town school in the East Midlands, chosen for convenience of location. The teachers were asked if any of the children taking part were having any

difficulties at home or at school. The teachers reported that boy 1 was distressed because his best friend had moved school and boy 5's parents had recently separated. The children were not known to have suffered significant trauma. Participating children were asked to give verbal consent and they each received a certificate thanking them for their participation (appendix 3).

3.4 Measures and Materials

The Make a World Technique / The Lowenfeld Technique

(Lowenfeld, 1950)

The Make a World Technique, also known as the Lowenfeld Technique (Lowenfeld, 1950), has been selected as the observation tool, because it is clinically accessible and allows the researcher to observe rather than try to categorise play at the time the child is playing. A standardised approach was needed that enabled the researcher to code behaviour according to the proposed domains of play rather than according to categories already developed by other authors. The Make a World Technique was considered most appropriate for this purpose.

A sand pit and materials were used to observe children's play (Lowenfeld, 1950). The sand pit was 100cm by 70cm by 70cm. 30lbs of dry fine sand was in the tray and 118 toy items were available for use. The toys selected were based on the ideas from the Make a World Technique (Lowenfeld, 1950). The toys may be classified as follows:

People (everyday people, cartoon people, Star Wars figures, army men)

Animals (wild, domestic, sea life, dinosaurs)

Transport (land, air, army)

Natural objects (cones, plastic trees, shells, stones)

Everyday items (mirror, cloth)

Containers and blocks

A hand held video camera was used to record each play session.

3.5 Procedure

Children were contacted through the children's teacher. A covering letter and an information sheet were sent home to parents, asking them to return a form if they would like their child to participate in the study (appendix 4). Replies were returned to the teacher who passed them on to the researcher. Consent forms were sent to those families who wanted their child to take part and these were returned to the researcher via the teacher (appendix 5).

Each child taking part was asked to play alone in the sand pit for 15 minutes and the session was video recorded. The video camera was placed on the researcher's knee, to limit distraction. Each child had access to the standard play materials and their instruction was to 'make a world in the sand pit, using any of the materials you wish' (based on Newson, 1992). Whilst playing, the child was encouraged to explain the world they were creating. The following questions

were asked in order to gain some understanding of the child's play: What is happening? What is this person/ animal doing? Who is in your world? Are you in this world? What is going to happen next? These questions were based on Newson's (1992) adaptation of The Make a World Technique.

4. Pilot Study

A pilot study was carried out on one boy. This resulted in changing some of the practicalities. The number of toys was decreased after the pilot study as the child said there were too many toys. 130 toys were reduced to 118. In addition the position of the researcher was changed to allow a better view of the play and to minimise distraction. The results from the observations of this child's play were not used.

5. Data Analysis

Each 15-minute observation of every child was converted from videotape onto the computer. Using a computer-based video-editing package, the middle five minutes from each observation was then isolated. The middle section of five minutes was selected because of observations from the pilot study. In the pilot study the child seemed to settle into his play after about five minutes; in the first few minutes the child asked questions, examined the toys and commented on what other children were doing. In the last five minutes the researcher interrupted play by reminding the child they had a few minutes left. These distractions may have influenced play and in the middle five minutes the child

seemed to be more settled. The verbal dialogues from the five minutes were transcribed to make it easier to analyse the data.

Analysis of the data was carried out using the Observer computer software package (Noldus Information Technology), a specialised programme designed to analyse observational data.

5.1 Creation of Coding Criteria

Devising a valid and reliable coding system entailed several steps. Firstly, criteria were created for each developmental domain of play. In order to do this, three randomly selected children were observed by two researchers and they each came up with individual criteria for each domain. The two researchers then discussed and agreed on the criteria for each domain. A description of what would be included in each developmental domain was produced. They also discussed that each play activity is potentially serving more than one developmental function.

The next step involved piloting the coding system. The two researchers watched together one additional randomly selected child and used the computer package to code the domains. As a result of this, difficulties with coding became apparent. There was a difficulty in recording the frequency of the domains, as it was not clear when to record a second occurrence of a domain or if it was a continuation of one occurrence. A second difficulty was that it became evident a

play activity could be coded as more than one domain and they can occur simultaneously. Therefore, because of these difficulties, the method of coding required further adaptation. The researchers decided to code each domain separately, coding one domain during one observation. Each five-minute section was therefore observed five times. Domains could therefore be multi-coded. In addition, a decision was made to record the duration of each domain rather than frequency.

The criteria for each developmental domain are described below:

1 Sensorimotor Development

Behaviour where the child moves toys/objects and/ or makes the toys/objects smell, hear, see, taste or touch. This includes the child placing objects into or on the edge of the sand pit; picking toys/ objects up; building with toys/ objects; making toys drive/ walk/ run/ (or do any other action); making animal noises.

2 Cognitive Development

Play where the child affirms knowledge and uses cognitive skills to play. This may include asking questions or making a statement. Planning and problem solving is included and also thinking about consequences of events and practicing for real life.

3 Socio-communicative development

Behaviour in which the child is talking to the researcher about his/ her world or about real events. The child can be elaborating on something, describing their

world, initiating conversation or responding to a question. Communication can be verbal as well as non-verbal, such as pointing to something. Eye contact, nods and gestures were not considered, as these were not picked up consistently by the video.

4 Imaginative/ Creative Development

Play where the child is using imagination and creativity to create their world. They can use fantasy and stories; figures and animals have a role, such as goodies and baddies or mother and baby.

5 Emotional Development

Play where the child seems to be expressing or managing a feeling(s) such as happy, scared or sad. They can use noises and different tones of voice to express their feelings. It can be verbal or non-verbal. The latter could be shown by shaking to indicate being scared or waving arms to express happiness.

5.2 Analysis of Developmental Domains

Following the creation of the criteria and with the coding system in place, the main data analysis could proceed. The five-minute segment of play from each child was observed using the Observer computer software package. Each five minutes was observed five times. For every child, the occurrence of the five domains was recorded during the five observations; one domain was recorded during each observation. Recording the occurrence provided a time (in seconds) and a percentage of time that each domain occurred within the five-minute section. Accompanying verbal dialogue was used as a guide to clarify

appropriate coding.

6. Reliability

To increase reliability a second researcher used the Observer package to record the occurrence of each developmental domain in three randomly selected children. The difference in seconds between the recordings from the two researchers was calculated and expressed as a percentage agreement. The average percentage agreements for each developmental domain were: sensorimotor - 98.8%; cognitive – 97.1%; socio-communicative – 98.1%; imaginative/ creative - 99.5% and emotional - 94.2%.

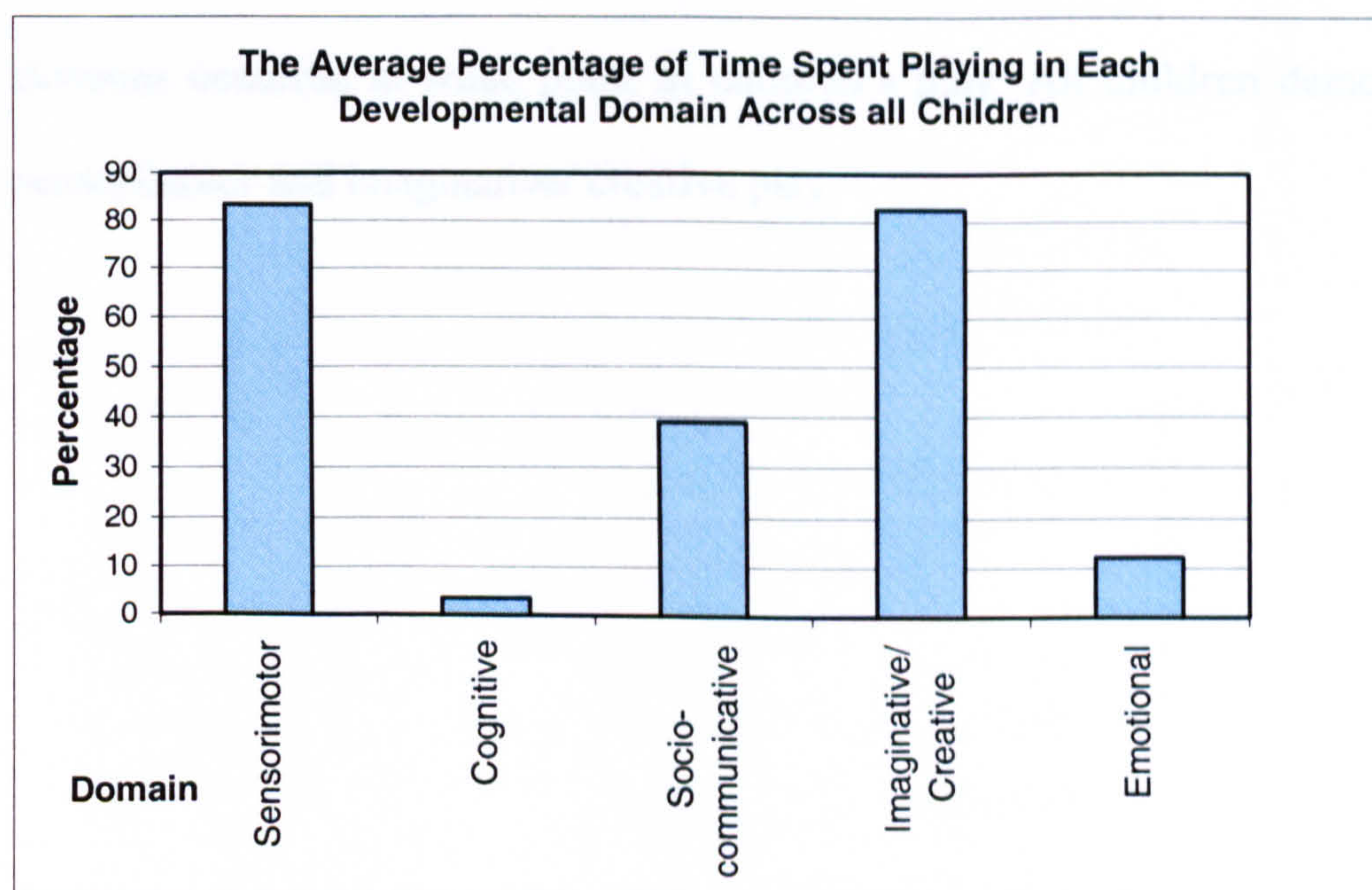
7. Results

Graph 1 below shows the percentage of time on average that children spent playing in each developmental domain. The graph illustrates that overall children spent the majority of time in sensorimotor and imaginative/ creative play. The percentages of time for each domain do not add up to 100% because the domains overlapped and at times more than one domain was occurring at once.

Statistical analysis using Kruskal-Wallis one-way analysis of variance and further exploration using the Mann-Whitney 'U' found statistical differences across the domains with respects to the percentage of time children spent playing in each domain ($X^2 = 41.053$, $df = 4$, $p < 0.001$). The children statistically spent more time in sensorimotor and imaginative/ creative play than the other three

domains (compared to sensorimotor and imaginative/ creative: cognitive- $U = 0.000$, $p < 0.001$; socio-communicative- $U = 17$, $p = 0.001$ and $U = 18$, $p = 0.002$ respectively; emotional- $U = 1.000$, $p < 0.001$). The children spent statistically less time in cognitive play than in sensorimotor, socio-communicative and imaginative/ creative play ($U = 0.000$, $p < 0.001$; $U = 24$, $p = 0.005$; $U = 0.000$, $p < 0.001$ respectively). Statistically, less time was also spent in emotional play than in sensorimotor, socio-communicative and imaginative/ creative play ($U = 1.000$, $p < 0.001$; $U = 35$, $p = 0.031$; $U = 1.000$, $p < 0.001$ respectively).

Graph 1: The Average Percentage of Time Spent Playing in Each Developmental Domain Across all Children



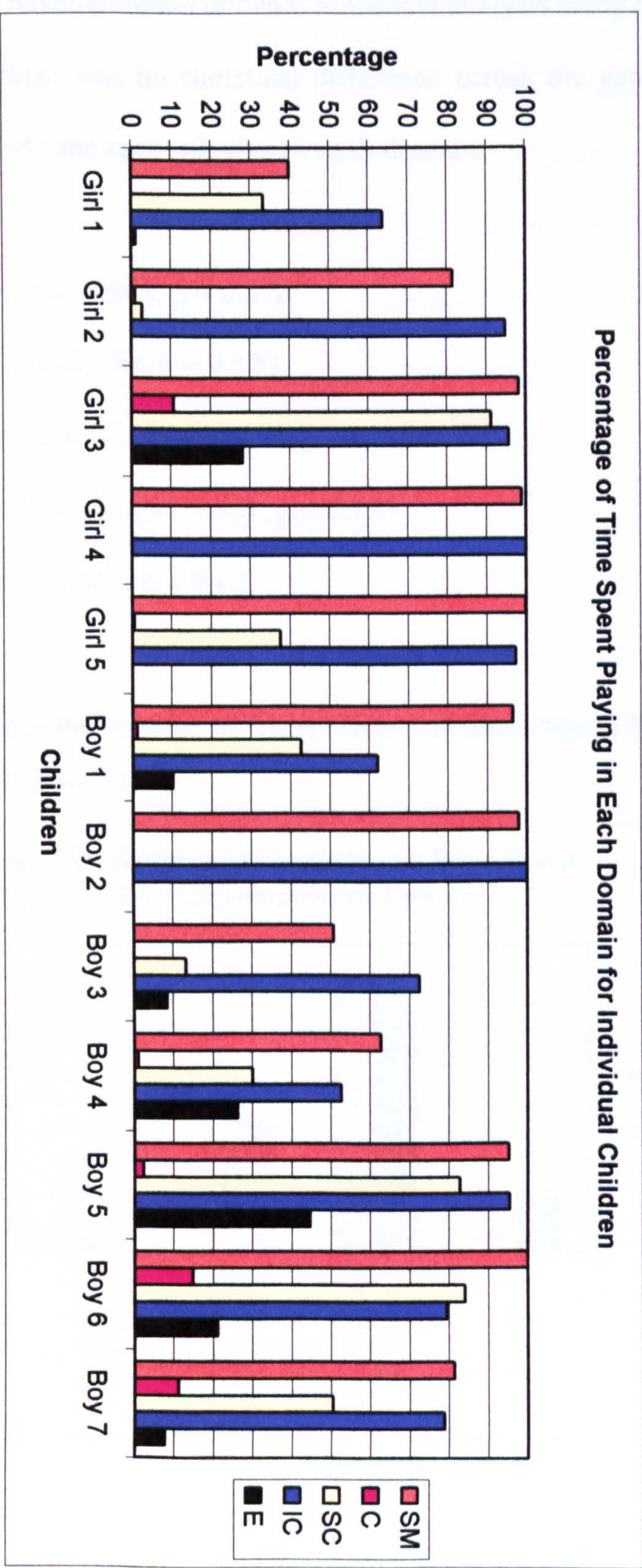
There are wide individual differences in behaviours demonstrated, as illustrated in Table 1 below. The table shows the ranges of percentage of time spent playing in each domain across all children. The largest range is for socio-communicative and the smallest range is for cognitive play.

Table 1: The Ranges of Percentage of Time Spent Playing in Each Domain
Across all Children

Domain	Range of Percentage of Time
Sensorimotor	39.9% - 100%
Cognitive	0% – 14.8%
Socio-communicative	0% - 91.2%
Imaginative/ creative	52.6% - 100%
Emotional	0% - 44.5%

Graph 2 shows the percentage of time that individuals spent playing in each domain. As can be seen by the graph, not every child displayed each domain within the five-minute interval. However, the results showed that all five domains occurred at some point in children’s play. All children demonstrated sensorimotor and imaginative/ creative play.

Graph 2: Percentage of Time Spent Playing in Each Domain for Individual Children



Key for Graph:

- SM = Sensorimotor

IC = Imaginative/ Creative
- C = Cognitive

E = Emotional
- SC = Socio-communicative

Graph 3 depicts the average percentage of time that girls and boys separately spent playing in each developmental domain. Statistical analysis using the Mann-Whitney 'U' found there was no statistical difference across the genders with respect to percentage of time spent playing in each domain:

Sensorimotor- $U = 14$, $z = -0.568$, $p = 0.570$

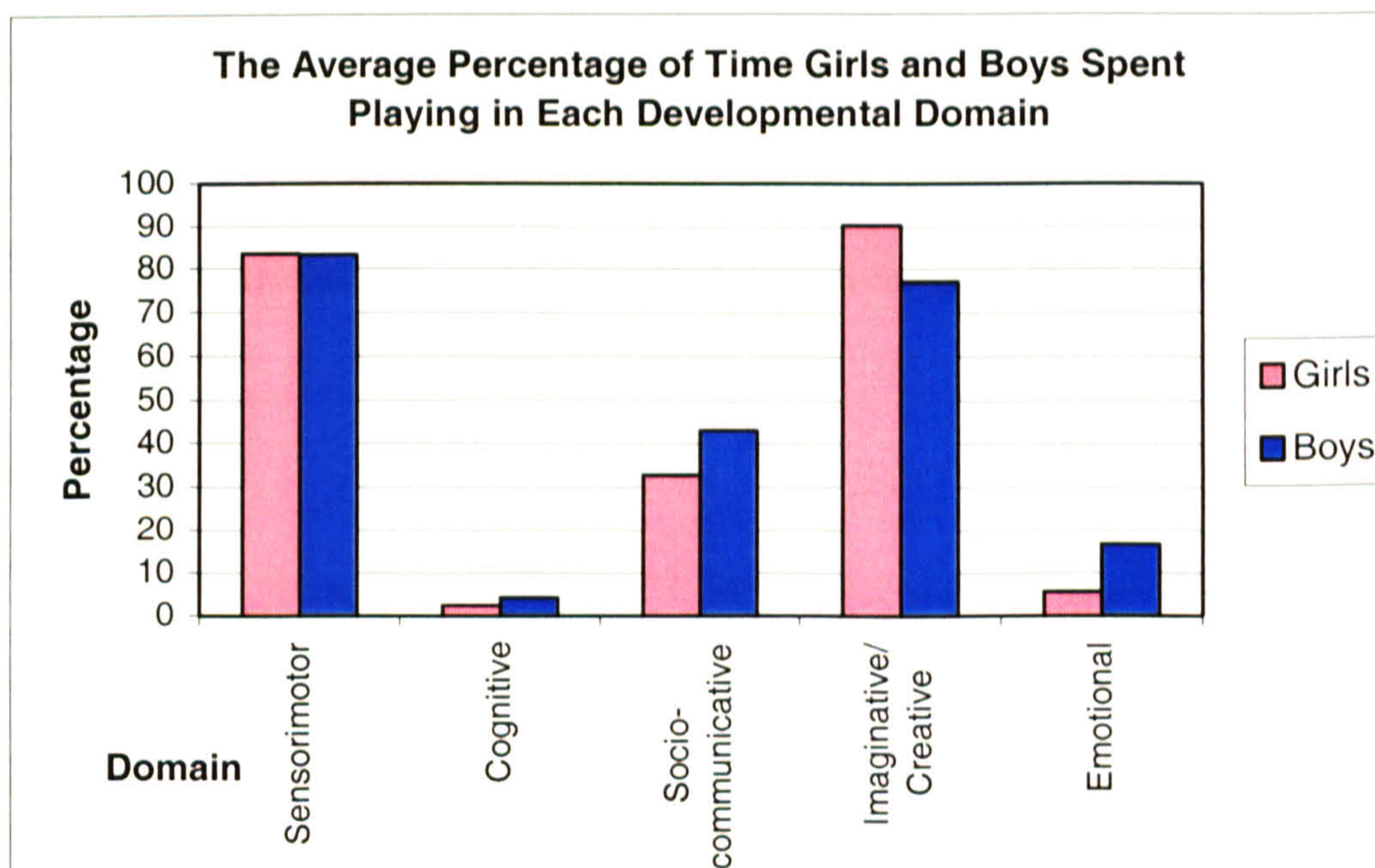
Cognitive- $U = 11.5$, $z = -0.994$, $p = 0.320$

Socio-communicative- $U = 14.5$, $z = -0.488$, $p = 0.626$

Imaginative/ creative- $U = 9.5$, $z = -1.301$, $p = 0.193$

Emotional- $U = 8.5$, $z = -1.488$, $p = 0.137$

Graph 3: The Average Percentage of Time Girls and Boys Spent Playing in Each Developmental Domain



8. Discussion

8.1 Discussion of Results

8.1.1 Domains of Play

Results showed that in this sample both boys and girls statistically spent more time in sensorimotor and imaginative/ creative play than in cognitive, socio-communicative and emotional play. There are a number of possible reasons as to why this may be the case. Firstly, Piaget (1962) proposed that children of 4-5 years old have the capacity for creativity and symbolism. In addition, literature suggests that children are active at 4-5 years old and sensorimotor play occurs throughout childhood (e.g. Pellegrini and Smith, 1998). Therefore, perhaps sensorimotor and imaginative/ creative play occur often in this age group of children. The frequent occurrence of these two types of play could also be explained by the method of observation i.e. The Lowenfeld Technique (Lowenfeld, 1950). The instructions encourage children to use sensorimotor and imaginative/ creative play i.e. 'make a world in the sand pit using the materials.' These instructions may have prompted a high level of these types of play to be displayed.

Results may have been different in observations of other forms of free play. Observations in the playground, for example, may have elicited more socio-communicative development as a result of having other children to play with and talk to. Playground observations may also have shown less imaginative/ creative play and more examples of cognitive development, as children may have

engaged more in games with rules. Had the observations been carried out during a free play session in the classroom, again the results would probably have been very different. Children may have displayed more emotional and socio-communicative play, as other children would be present to talk to, argue with and have fun with. The cognitive domain may have increased, as children would have to choose and plan activities. The results therefore, are very specific for the observation approach used.

Another explanation as to why results showed that children spent more time in sensorimotor and creative/ imaginative play than in the other three domains concerns the coding criteria. It may be that cognitive, socio-communicative and emotional play were more difficult to code than the other types of play and that the coding criteria did not encompass all features of these three domains. For example, in this study instances of cognitive development could only be recorded when children said or did something that made it obvious to the researcher that cognitive skills were being used. Therefore, only the more advanced cognitive skills were recorded, as it was clearer when these were occurring i.e. problem solving, planning and consequences of actions. However, when a child is thinking about their world they are also using cognitive skills, but this could not be recorded as an instance of cognitive play, as it could not clearly be seen. Further, emotional development was difficult to identify. This was because the researcher was not aware of the child's previous history. When the child acted out a scene, it was not clear if the event had happened or was going to

happen and if it had any emotional meaning for the child. Therefore instances of emotional play may have been missed. In addition, the criteria for socio-communicative play might not have encompassed all features of this type of play. For example, there were times when a few children were talking to themselves and these instances were not coded.

Sensorimotor and imaginative/ creative play were perhaps easier to code, as it was more obvious when these occurred and therefore high levels of these types of play were recorded. This is supported by sensorimotor and imaginative/ creative play having the highest inter-rater agreement; this suggests they were easier to recognise and code than the other types of play.

An explanation for the small amount of time children spent playing in emotional play could be that the situation was unnatural; the children did not know the researcher and there were no other children present. These factors may have limited expression of emotions and results may have differed had the participants been in their preferred environment, with familiar people and other children. Similarly, socio-communicative examples may have been limited as the children were in an unnatural setting with only an adult present. They may have communicated differently had other children been present.

All five developmental domains did occur at some point in this sample of children's play. There was a great deal of variation amongst individuals with

respect to the time spent playing in each domain. Not all the children displayed every domain in the five-minute interval of play. This suggests that although the domains of play did exist and occur in this sample, there are some marked individual differences.

8.1.2 Gender Differences

Results showed that there were no statistical differences between girls and boys in the percentage of time spent playing in each developmental domain. This is a surprising finding given differences in gender reported in the play literature (e.g. Baron-Cohen, 2003; Garvey, 1990). For example, it may have been expected that girls would spend more time engaging in socio-communicative play as the researcher was female and the girls may have felt more comfortable with a same-sex adult (O'Connor, 1991). However, in this sample boys were just as likely to spend time in socio-communicative play as girls.

There are a number of possible reasons why no statistical differences were found between boys and girls play. Firstly, the gender of the researcher may have influenced the results e.g. boys may have been comfortable with a female; indeed their teacher was female. Individual differences could also explain the results. The girls in this sample could have been quieter than expected and the boys more verbal. Another, or larger, sample may produce different results. Perhaps no statistical difference was found between girls and boys play because the study did not explore content of play. Further research is warranted to investigate

gender differences in content of play.

8.2 Limitations of Methodology

8.2.1 The Coding System and Analysis

The study has some methodological limitations. Firstly, it was not always clear when specific domains were occurring. In particular, it was difficult to code emotional and cognitive play, as it was not obvious when these were occurring. Whilst the domain criteria were largely helpful in making coding decisions, there were still some difficulties. Discussions with the second researcher helped to clarify whether events constituted examples of the different domains. However, it is evident that in order to repeat the study, researchers would have to be trained in the identification of each domain and a coding manual for each domain would have to be developed.

Whilst creating the criteria for the domains, examples of imaginative/ creative play were explored. When a child seemed to have created a scene they had experienced (e.g. going to the seaside) there was a question as to whether it should be recorded as imaginative/ creative development. It could be argued that it is not true imagination as it has happened or about to happen. It was decided that the child is using their imagination to recreate the scene and therefore should be recorded as imaginative/ creative development.

A second limitation involves socio-communicative play. This type of play was

recorded when the children responded to questions asked by the researcher and when they talked or indicated something to the researcher. Although the questions asked by the researcher were standard, the researcher may have responded with non-verbal gestures, which may have encouraged some children to continue to talk. Conversation by the child may have depended on how comfortable they felt and possibly the gender of the researcher, who was female (e.g. O'Connor, 1991). The actual presence of a researcher and their interests in the play may have also influenced the results (i.e. the Hawthorne effect, cited in Shaughnessy and Zechmeister, 1997).

A further limitation involves the use of the middle five-minute section. Results may have differed had another five-minute section or the whole fifteen minutes of play been observed. Perhaps early in the fifteen-minute observation, children spent more time in socio-communicative play, as they may have been more likely to ask questions in order to feel more comfortable. Further, cognitive play might have been displayed more frequently, as the children may have been planning their world.

Another limitation of the methodology is that there is the possibility that a child may have responded during the five minutes of play in a way that was not covered by any developmental domain. This study, therefore does not demonstrate conclusively whether the developmental domains, described by Fletcher et al., (2004), cover all types of play. An extension of the current study

might include calculating whether all forms of play could be categorised with these five domains. Time sampling could be a way of investigating this i.e. breaking down the five-minute section into 10-second segments and recording whether at each 10-second section a domain was evident.

8.2.2 The Observational Setting

An improvement to the study would be to observe the children out of the classroom and to use a fixed video-recorder, rather than a hand held one. A fixed video recorder would reduce the disruption caused by holding a video camera in close proximity to the child. Some children commented on the video camera and wanted to look through the lens. Having a fixed video-recorder on the wall would limit the distraction of the camera and the researcher. Further, observing the children out of the classroom, would help to minimise the children's expectations of conversation and the interruptions by other children.

8.2.3 External Events

A further possible limitation of the study was that the observations were carried out at the time of the Iraqi war in June 2003, and it may therefore be difficult to generalise this finding to other children at other times, as it may have been strongly influenced by external events. Children may have been acting out scenes from television or events they have heard about and this would have been a recording of imaginative/ creative development or emotional development. There will always be external events that could be influencing results.

Nevertheless, it would be interesting to repeat this study again with children of the same age, to see if the findings differed.

8.2.4 Reflection on Using The Make a World Technique

The Make a World Technique (Lowenfeld, 1950) seemed to be an appropriate choice for an observation approach in this study. It gave the researcher the opportunity to observe without having pre-determined criteria. It facilitated the exploration of play and enabled the domains of play to be recorded and analysed as both the world and the child could be observed. It was also found to be clinically accessible and user friendly. Nevertheless, as suggested in 8.1.1 the very nature of The Make a World Technique may have influenced the results and using an alternative observational method would probably have produced different results.

8.3 Implications for Clinical Practice and Future Research

This exploratory study is a first step to empirically explore behaviours of play and aspects of development that they enhance. The study provides some information that may be of clinical use, if these results were to be replicated.

Further research is warranted to develop more valid and reliable criteria for each developmental domain. In order to do this, a larger sample of children is required. In addition, the study needs to be replicated with different age groups to develop a set of age-related norms. Once criteria for the domains and age-

related norms have been developed, these could provide an assessment protocol that may be used to determine if a child is developing play skills appropriately. If one skill is lacking in a child's play, such as imaginative/ creative development this could indicate a difficulty e.g. autism (APA, 1994). More research has to be conducted to validate the domains and develop reliable and valid criteria and age-related norms, but this study could be a useful starting point.

With an assessment protocol in place, The Make a World Technique could be used to conduct the assessment. However, additional assessments may have to be carried out to obtain a fuller picture. For example, The Make a World Technique observes children playing alone and does not adequately assess interaction. Usually more than one assessment is required in clinical practice, therefore The Make a World Technique could be used as part of an assessment.

It would also be interesting to conduct this research again to see if children's play was affected by the Iraqi war here. Another sample of children of the same age could be compared to the sample in this study, in terms of the play domains, at a time of relative international peace. In addition, more research is required to explore any gender differences in the developmental domains that children engage in and also any gender differences in content of play.

8.4 Conclusions

The study provides preliminary evidence that all five developmental domains of

play do exist and could occur. No statistical differences were found between boys and girls in the amount of time spent playing in different forms of play. The study showed that children in this sample spent statistically more time in sensorimotor and imaginative/ creative play than in the other types of play, although there may be methodological reasons for this. The high level of inter-rater reliability supports these findings.

More research is warranted to validate the five domains and create valid and reliable criteria for each. In addition, further research is required to develop age-related norms. The criteria for the domains and age-related norms could provide an assessment protocol that may be useful in clinical assessments, in order to highlight any unusual presentations and clinical problems.

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**Chapter Three: Brief Paper –
Exploring Gender Differences in Aggressive Play: An Observational Study**

Word Count: 3,643

Abstract

Background: There are many accounts of gender differences in play (Baron-Cohen, 2003). There is also evidence that high levels of aggressive play may be an indicator of emotional and behavioural problems. The aim of this study is to compare the duration of aggressive play in boys' and girls' play.

Method: The Lowenfeld Technique (Lowenfeld, 1950) was used to observe children's play. The Observer computer software package was utilised to record the amount of aggressive play in 12 children.

Results: A statistical difference was found between girls' and boys' aggressive play. Boys displayed more aggressive play than girls.

Conclusions: Boys seem to display more aggressive play than girls. Clinical implications and suggestions for future research are discussed.

Keywords: Aggression; Gender; Lowenfeld Technique; Play.

1. Introduction

This study involves an observational study of children's play using The Make a World Technique (Lowenfeld, 1950). The aim is to compare boys' and girls' play to identify gender differences in the amount of aggressive play.

Firstly, literature on gender differences in play will be examined. Variation in boys' and girls' types of play and their preferences for toys will be discussed. An observational study, comparing the amount of aggressive play displayed in children's play will then be described.

1.1 Background

There is evidence to suggest that there are differences in the way boys and girls play (e.g. Baron-Cohen, 2003; Garvey, 1990; Connolly, Doyle and Cheschin, 1983). Preferences for toys and activities begin to appear during the child's second year of life. This may not be surprising, since parents and relatives provide the child with stereotypical toys, clothing, room furnishings and entertainment. Experiences in day care and nursery school may amplify the preference for certain toys and associated play behaviours.

1.2 Types of Toys

Evidence suggests there is a great deal of variation in the types of toys that boys and girls play with. Even as toddlers, boys are more interested in cars, trucks, planes, guns and swords. The noises they make are appropriate to these toys e.g. sirens, bangs and motor sounds. Girls, however, at two years old are fascinated in dolls, jewellery, dressing up and adornment (Baron-Cohen, 2003). To support

this statement Baron-Cohen (2003) gives the example that when children are faced with a choice of toys on the carpet, by two years of age, boys are far more likely to select toy vehicles and building blocks and the girls will choose the dolls. However, although Baron-Cohen gives this example, he does not give any systematic empirical evidence to support these observations.

Garvey (1990) agreed that boys tend to choose 'masculine' kinds of toys, such as soldiers and trucks. In addition, she stated that girls can also choose masculine toys, but less consistently, preferring dolls and household objects. Furthermore, it was noted that girls' interests are more versatile than boys. Again, Garvey's comments about boys' and girls' preferences are based on her observations and not on systematic empirical evidence.

1.3 Content of Play

Boys are on the whole more boisterous, energetic and noisy (Garvey, 1990). Their play reflects this; it tends to be more energetic and physically demanding. Boys also seem to be fonder of rough-and-tumble play than do girls (Brannon, 1996). They spend more time in activities involving gross motor skills such as running, jumping, throwing a ball, compared to girls. However, it is also noted that girls playing quietly with girls is stereotypical rather than typical (Brannon, 1996). It is worth noting that Garvey's (1990), and Brannon's (1996) comments about boys play being more physical and energetic are not supported by systematic empirical evidence.

There seem to be differences in the actual content of boys' and girls' play. Black (1989) observed interactions of three and four year olds in same-sex groups of three. She found that boys were more likely than girls to generate pretend themes unrelated to props in the room. In addition, boys tended to enact their themes in pretend play, whereas girls were more likely to describe and plan their play. Boys had a propensity to switch from one pretend play topic to another.

1.4 Gender Differences in Aggressive Play

There seems to be evidence that boys display more aggressive play than girls. Garvey (1990) suggested that in pretend play, boys prefer to adopt roles of powerful superheroes, or characters that fight and kill. Girls on the other hand, take on roles of family members, engaging in more nurturant activities.

In a study on the content of children's play, Connolly, Doyle and Cheschin (1983) compared boys' and girls' pretend play by observing four and five year olds interacting in groups in a nursery school. They found that boys adopted character roles and engaged in more aggressive type play, such as substituting the intended use of a toy for a more aggressive item e.g. using a toy iron as a gun. Whereas, they observed that girls preferred familial roles and used replica objects, such as using a toy iron for the pretend action of ironing.

Similarly, Von Klitzing et al., (2000) conducted a study on the play narratives of 652 children and found that boys had significantly more aggressive themes in their play than did girls in their sample.

Holmberg, Benedict and Hynan (1998) conducted a study that investigated gender differences in children's play therapy themes. The researchers used a clinical sample to investigate the possibility that gender and trauma history can influence the play themes in therapy. The themes demonstrated by 44 children participating in therapy were analysed using the Benedict Play Theme Analysis System (BPTAS) (Benedict et al., 1995). The BPTAS is an instrument that classifies the themes displayed by children in play therapy. The children in this study had a history of attachment disturbance or exposure to violence or both. They found that in general boys displayed more aggressive themes during play therapy than girls. In addition, the groups of children with a history of greater stresses (the exposure to violence group and the exposure to violence and attachment trauma group) displayed higher levels of aggressive play, when compared to the attachment disturbance only group. Although this research analysed play during therapy, which may be different from other types of free play or play in a non-clinical sample, it seems to indicate that boys tend to play more aggressively than girls and that a history of trauma can influence the amount of aggressive play.

Landy (2001) suggested that children who present with high levels of aggression are at risk of developing conduct disorder and that aggressive play can convey a clinical problem. Further, Von Klitzing et al., (2000) suggested that aggressive play is a predictor of behaviour problems. In their study, they found that aggressive themes in the play narratives of girls were related to externalising and internalising problems. An important finding from the study was that, for both boys and girls, when aggressive themes were expressed in an incoherent

narrative there was an association with more behaviour problems. It would therefore be clinically useful to be able to identify when aggressive play is excessive. Given the proposed differences in play content and process between the genders, we first need to explore this further adopting an empirical stance.

1.5 Summary

There are suggestions in the literature about the differences in play between the two sexes. Boys seem to display more aggressive, rough-and-tumble play, and their pretend play is more likely to involve playing out fighting and killing. Boys tend to prefer to play with vehicles, guns and swords. Girls on the other hand, although perhaps they do not play quietly and can choose 'masculine' type objects, show a preference for dolls, household objects and playing at familial roles. However, there is a lack of systematic empirical research into these differences. The majority of ideas presented are based on the authors' observations. Since it has been suggested that aggressive play is linked to future conduct disorder, it would be clinically helpful to know what is normal aggressive play and what perhaps is a clinical presentation. In order to do this we first need further investigation into gender differences in aggressive play in a non-clinical sample.

2. Aim of Present Study

The aim of the present observational study is to compare aggressive play in boys' and girls' play. Differences in the duration of aggressive play will be identified and discussed.

3. Methodology

3.1 Design

The Make a World Technique (Lowenfeld, 1950) was used to observe children's play. Each child was observed for a time period of 15 minutes. The play was video recorded and analysis of the duration aggressive play was carried out on the observations.

3.2 Ethical Approval

Ethical approval was obtained from Coventry University and North West Multi-centre Research Ethics Committee (appendix 2).

3.3 Participants

The method of sampling was to approach 60 parents of children in two reception classes in a market-town school in the East Midlands. The school was chosen for convenience of location. The parents of 13 children opted in, which led to five girls and eight boys being included in the sample, with one boy serving as a pilot study. The children were aged 4-5 years old; the average age was 5 years 3 months. The children were not known to have suffered significant trauma. The teachers were asked if any of the children taking part were having any difficulties at home or at school. The teachers said that the only problems they were aware of were, boy 1 was upset as his best friend had moved away and the parents of boy 5 had recently separated. Children gave their verbal consent for participation and each received a certificate for taking part (appendix 3).

3.4 Measures and Materials

‘The Make a World Technique’ / ‘The Lowenfeld Technique’ (Lowenfeld, 1950)

The Make a World Technique has been selected as the method of observation, because it is clinically accessible and allows the researcher to video-record play from a fixed location, so that it can be analysed later. A standardised approach was needed that enabled the researcher to analyse play across all children. The Make a World Technique was considered most appropriate for this purpose.

In accord with The Make a World Technique (Lowenfeld, 1950; 1960), a sand pit and toys were used in the observations. The sand pit was 100cm by 70cm by 70cm, with 30lbs of dry fine sand and 118 toy items available for use. The toys selected were based on the ideas from The Make a World Technique (Lowenfeld, 1950). The toys may be classified as follows:

People (everyday people, cartoon people, Star Wars figures, army men)

Animals (wild, domestic, sea life, dinosaurs)

Transport (land, air, army)

Natural objects (cones, plastic trees, shells, stones)

Everyday items (mirror, cloth)

Containers and blocks

A hand held video camera was used to record each play session.

3.5 Procedure

The parents of children were contacted through the child's teacher, by sending a covering letter and an information sheet to parents. They were asked to return a form to the teacher if they would like their child to participate in the study (appendix 4). Replies were then passed on to the researcher. Consent forms were sent to those families who wanted their child to take part and these were returned to the researcher via the teacher (appendix 5).

Each participating child played alone in the sand pit for 15 minutes. The child had access to the standard play materials and their instruction was to 'make a world in the sand pit, using any of the materials you wish.' The session was video recorded, with the video camera being placed on the researcher's knee, to limit distraction. During the session, the child was encouraged to describe their world. The following questions were asked to enable some understanding of the child's play: What is happening? What is this person/ animal doing? Who is in your world? Are you in this world? What is going to happen next? These questions were derived from Newson's (1992) adaptation of The Make a World Technique.

4. Pilot Study

A pilot study was carried out with one boy. As a result of this, some changes were made. It was decided that some toys would not be included, as the child said there were too many toys and it seemed as if he didn't know how to begin to make his world. 130 toys were reduced to 118. In addition, the researcher altered

her position to allow a better view of the play and to minimise distraction. The results from the observations from this child were not used.

5. Data Analysis

Each 15-minute observation was converted from videotape onto the computer. The middle five minutes of each observation was then identified using a computer-based video-editing package. The middle five minutes was selected because from observing the child in the pilot study it seemed that this section was the most appropriate period of time to use. In the pilot study, within the first five minutes of play the child asked the researcher questions and examined the toys. It appeared that the middle five minutes was when the child had settled into play and was concentrating on his world. The last five minutes was interrupted with the researcher reminding the child they had a few minutes left and this may have distracted the child and/ or influenced play.

The first stage of data analysis involved constructing criteria for aggressive play. Two researchers carried this out by observing four of the children's play. Independently they wrote down the aggression that they observed in the first child's play. The other three children were then observed and any other types of aggression, not already noted, were written down. In the fourth child's observation, there did not seem to be any new types of aggression not already noted, so the rest of the children were not observed, as it seemed all the aggression was covered. The two researchers then independently grouped the types of aggression they identified into categories. The two researchers then compared their categories and any differences were amalgamated to produce one

list of categories of aggression. Collectively the categories provide the criteria for aggressive play for this study. The categories were as follows:

Feelings: expressing feelings of anger, hate, revenge.

Actions: hitting toys or toys hitting other toys, throwing of toys.

Themes: fighting, hurting, punching, violence towards others, shooting, being eaten, being 'got' and chased.

Toys used: guns, hand grenades and mines.

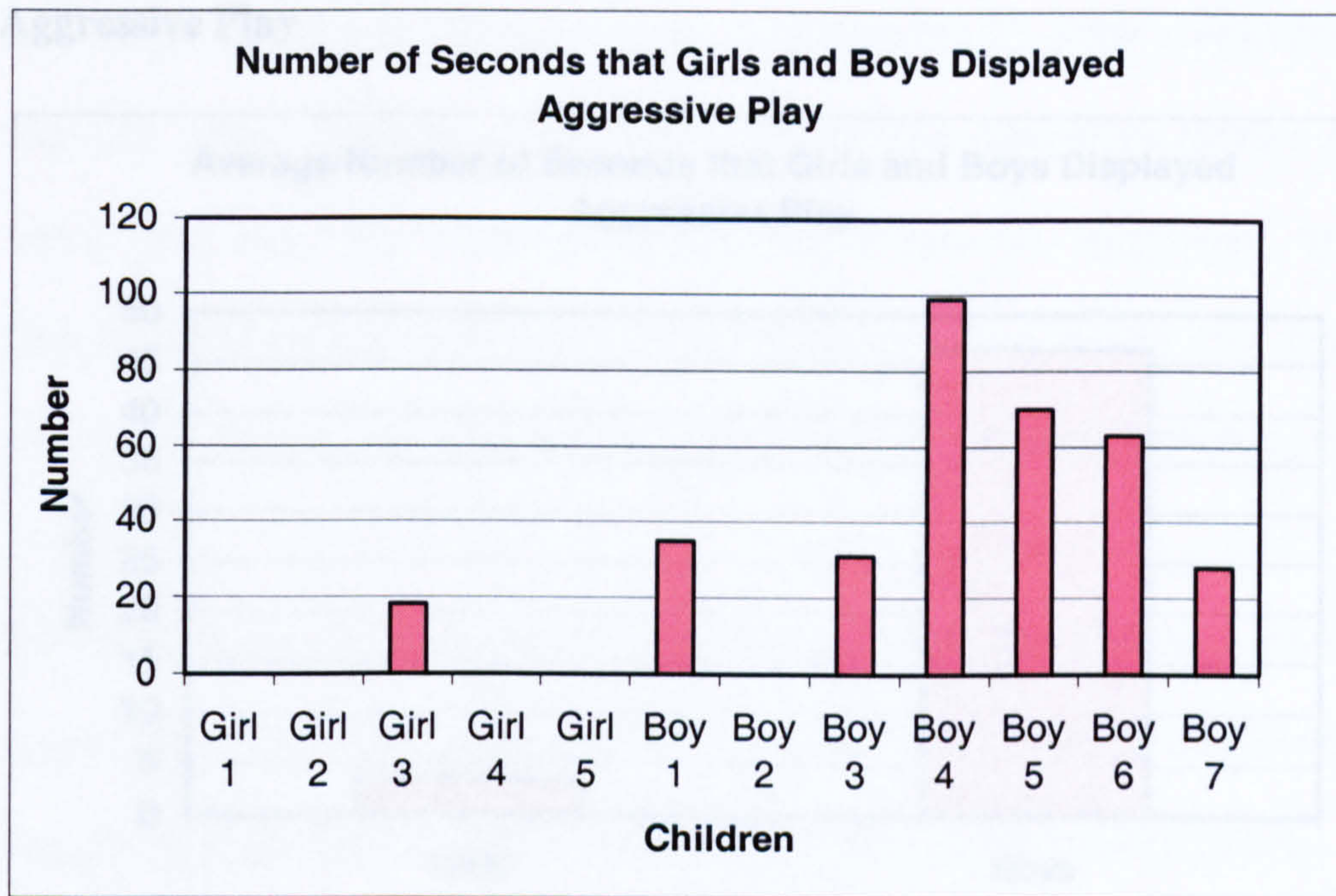
Sounds: Making sounds that suggest being hurt, 'got' or violent e.g. 'ahhh' 'roar.'

The next stage of data analysis involved observing the five-minute section of each child's play and recording the duration of aggressive play for each child, as it occurred given the criteria above. Analysis of the duration of aggressive play was recorded using the Observer computer software package (Noldus Information Technology), a specialised programme designed to analyse observational data. The duration of aggressive play for boys and girls was then calculated and the results are displayed below.

6. Results

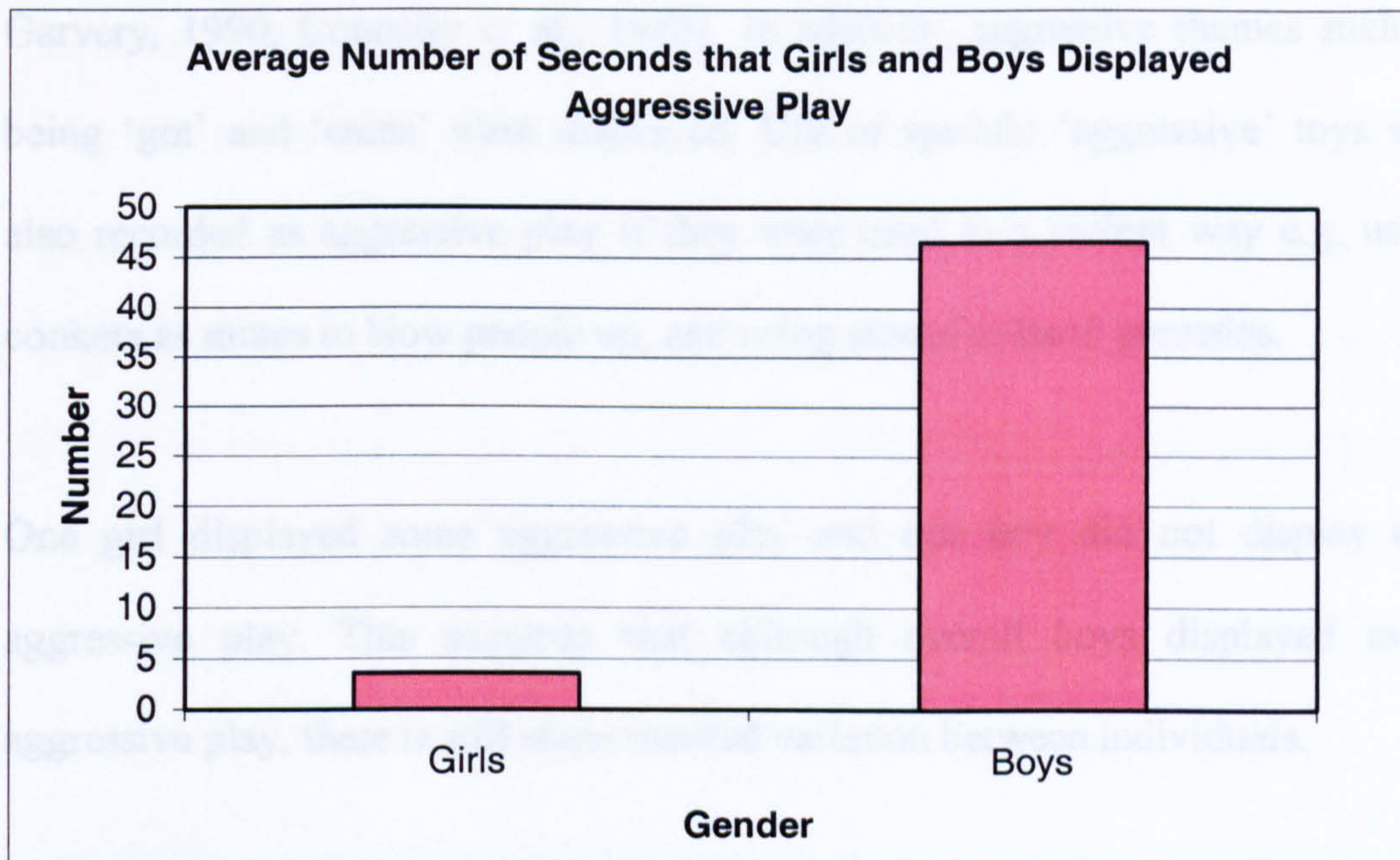
Graph 1 below shows the number of seconds over the five-minute interval, that individual girls and boys displayed aggressive play. The graph shows there is variation between individuals and that there were more boys who displayed aggressive play than girls.

Graph 1: Number of Seconds that Girls and Boys Displayed Aggressive Play



Graph 2 below portrays the average number of seconds that boys and girls displayed aggressive play. Statistical analysis the Mann-Whitney 'U' found a significant difference between boys and girls in the duration of aggressive play. The boys in this sample displayed aggressive play significantly more than girls ($U = 3$, $z = -2.442$, $p = 0.015$).

Graph 2: Average Number of Seconds that Girls and Boys Displayed Aggressive Play



7. Reliability

To assess reliability a second researcher used the Observer package to record the amount of aggressive play in 4 randomly selected children. The differences in the number of seconds of aggressive play recorded by the two researchers were calculated and expressed as a percentage of agreement. For the four individual children there was a 95.9% agreement, 100% agreement, 99.6% agreement and a 96.5% agreement, giving an overall average agreement of 98%.

8. Discussion

8.1 Discussion of Results

This study supports the evidence that boys display more aggressive play than girls (e.g. Garvey, 1990; Connolly, et al., 1983; Holmberg, et al., 1998). A statistical difference was found between girls and boys in the duration of

aggressive play. A type of aggressive play recorded in this study was play such as pretend fighting and killing, which was reported by other researchers (e.g. Garvery, 1990; Connolly et al., 1983). In addition, aggressive themes such as being 'got' and 'eaten' were displayed. Use of specific 'aggressive' toys was also recorded as aggressive play if they were used in a violent way e.g. using conkers as mines to blow people up, and using stones as hand grenades.

One girl displayed some aggressive play and one boy did not display any aggressive play. This suggests that although overall boys displayed more aggressive play, there is still some marked variation between individuals.

It is perhaps noteworthy that the research was carried out at the beginning of the Iraqi war in June 2003. These events may have influenced the amount of aggression displayed. Perhaps the children who displayed aggression were replicating scenes from the war on television or they may have heard people in their family talk of the war. In addition, other factors not controlled for, may have caused the difference between girls' and boys' aggressive play. For example, those who displayed aggression may have witnessed violence in their families, which could account for the increase in aggressive play, as was suggested by Holmberg et al., (1998).

8.2 Limitations of Methodology

There are several limitations to the methodology of this study. Firstly, it was difficult at times to decide whether play was aggressive or not. A judgement sometimes had to be made based on a child's tone of voice or the noises they made.

For example, one child held an animal in each hand and one seemed to be chasing the other. The child then made 'ahhhh' sounds as the first animal was caught and then made the animal drop into the sand pit as though it was dead. The sounds the child made and the loud forceful tone of the noise seemed to suggest this was aggression. However, another child who held two animals and one moved after the other did not make these noises, nor did one catch the other or fall to the ground, so this was not recorded as aggressive play. The line between aggressive play and non-aggressive play was sometimes subtle. Having two researchers to create the criteria for aggressive play was helpful as uncertainties could be clarified. However, even with these criteria, it was sometimes difficult to make a judgement.

In particular, ambiguity was increased, when the child did not talk about what was happening in their world. The researcher had to rely on non-verbal behaviour to decide if it was aggressive play or not. The researcher used information such as the types of toys the child was using, what they did with the toy and how they used the toy. For example, one child picked up a soldier and pretended to shoot with it. Another hit a man onto another man in a forceful manner.

Further, if a child did not talk for the duration of or part of the five minutes observation, the researcher may not have known about an aggressive theme. The child could have been creating an aggressive scene in their world, but with no commentary it may not have been recorded as aggressive play. For example, this was evident when one child spent three minutes silently creating his world and

there did not seem to be any non-verbal information indicating that there were aggressive themes to the play. Only when he told the researcher what was happening in his world was it apparent that he was displaying aggressive play and that the animals were fighting and killing each other. For the first three minutes when silently creating the world, it was not recorded as aggressive play.

Results may have been influenced by the Hawthorne effect i.e. the presence of the researcher and the interest the researcher showed in the children's play (cited in Shaughnessy and Zechmeister, 1997). The researcher may have influenced aggressive play such as by giving non-verbal nods and encouragement to those displaying more aggressive play as this play was perhaps the more engaging. The gender of the researcher may have been significant. The researcher was female and children may have played differently if the researcher was male. The gender differences could be explained by shyness. Perhaps the girls in this study were shyer and less willing to display aggressive, loud behaviour whereas the boys were less shy.

A further limitation of the study was the small sample size. Only 13 children participated in the study, because of the time and resources available. An improvement would be to increase the sample size. However, this study could be used as a pilot study for future research.

8.3 Implications for Clinical Practice and Future Research

It is clinically useful to know that there seems to exist differences in the duration of aggressive play between girls and boys. This will be important in assessing

clinical problems. It could possibly indicate clinical difficulties if an excessive amount of aggressive play is displayed or it could ease anxieties that aggressive play is normal in some boys and girls. Age related norms for the duration of aggressive play in boys and girls would be helpful to indicate a clinical presentation. Future research is warranted into creating these norms. Firstly, research is needed to validate the gender differences in aggressive play and secondly to create the age-related norms. A larger sample is required to carry this out, with children of different ages.

Since there is evidence to suggest that aggressive play is linked to future conduct disorder (Landy, 2001; Von Klitzing, et al., 2000), age-related norms are necessary to highlight when aggressive play is beyond the norm and indicating a clinical problem.

8.4 Conclusions

Although there are methodological limitations, this study seems to suggest that there are gender differences in the duration of aggressive play in this sample of children. The study found that boys statistically displayed more aggressive play than girls. There was a high level of inter-rater reliability, giving support to these findings.

Future research is warranted into validating these results on a larger sample and on children of different ages. In addition, further studies could produce age-related norms for the duration of aggressive play displayed by boys and girls. This would be useful in clinical assessments for the identification of clinical

problems. Given the suggested link between aggressive play and conduct disorder this would be particularly useful.

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Chapter Four: Research Review

Word Count: 2,133

Abstract

This research review reflects on the previous three chapters. It comments on methodological issues such as the difficulties encountered when conducting the observations of play and with devising a complex coding system. It also discusses the advantages and disadvantages of having a second researcher involved in the research.

The review also makes observations about the research process, such as how the study started from one idea and progressed to the topic that was explored. Comments are also made about how the year group coped with the research and how as a group we moved through various stages. In addition, the review reflects on personal experiences of carrying out the project. As the research has progressed I have experienced various emotions and stages. It has been a learning experience and I have discovered aspects about myself as a result of undertaking the study. The process has been a challenging experience, both academically and personally.

1. Introduction

This review is a reflection on the previous three chapters. It will include observations about the methodology and about the process of undertaking the research. It will also comment on personal reflections, discussing the challenges and experiences of carrying out the project.

The overall study involved exploring children's play, looking at types of play, domains of play and gender differences in aggressive play. Chapter One involved reviewing the literature on play, focusing on types, stages and functions of play. This led to a proposal that play can be classified into five developmental domains, namely sensorimotor, cognitive, socio-communicative, imaginative/ creative and emotional play. Chapter Two involved using 'The Make a World Technique' (Lowenfeld, 1950) in order to observe and analyse children's play. Children were video-recorded playing in a sand pit, with many toys and materials available for them to use. Children were invited to 'make a world in the sand pit using any of the materials they wished.' The aims were to explore the existence and occurrence of the developmental domains identified in Chapter One and to explore any gender differences with regards to time spent playing in the different types of play. Chapter Three also involved using the Lowenfeld Technique to explore gender differences in aggressive play. Children's play was analysed for the duration of aggressive play displayed, comparing the difference between girls and boys.

2. Methodological Reflections

The Make a World Technique was used as an observational method in Chapters Two and Three. When observing the children, it was very difficult not to engage in dialogue with them. They were sociable children and were keen to converse. It would have been uncomfortable for the children and myself had I not commented or responded to what the children were doing. I limited conversation with the children and the questions I asked the children were standard. However, I may have influenced what the children did and encouraged them to continue with something, as I could have been positively reinforcing by nodding and smiling. I was aware of this difficulty, but at the same time I had to engage with the children so they could describe their world. In addition, the observations took place in a classroom, which meant the children were used to playing with adults in that situation and not used to just being observed. Therefore the children may have found it strange had I not responded. As suggested in Chapter Two an improvement may have been to observe the children out of the classroom, for the researcher to sit further away from the child to limit distraction and to use a fixed camera.

There were other challenges with carrying out this research, such as the difficulty in devising a complex coding system with newly developed domains of play. An attempt was made to describe reliable criteria for the domains. A great deal of care had to be taken when observing the children's play in order to decide what constituted examples of each domain. It was an unknown area to investigate and without pre-determined criteria or a coding system, it proved to be a challenge. I found it a difficult obstacle because of my anxiety of doing something

unfamiliar. In addition, because of the small sample size, it may be that not every feature of each domain of play was covered by this sample of children. Another sample may exhibit different play activities that have not yet been classified as a domain. Lack of time and resources meant I was not able to carry out the study on a larger sample. However, this is a frustration of conducting research.

There were advantages of having a second researcher with whom ideas about criteria could be discussed and decided. It was useful to have other opinions and points of view about examples of each domain. The second researcher also helped to create more reliable criteria as our independent ideas were amalgamated and discussed. The second researcher helped to create the criteria for the domains. Therefore, the second researcher had knowledge about the criteria and was able to be trained in identifying and coding the domains of play. It was useful to have the same second researcher to be involved in the creation of criteria and the main analysis and coding. There were some challenges to working with a second researcher, such as when there were differences in opinion. These had to be discussed and thought about further. In addition, time and effort had to be taken to describe the project to the second researcher and to train her in identifying and coding the domains of play.

3. Observations on the Research Process

3.1 Developing the Research Idea

An interesting aspect is the process of how the research has evolved in to what it is now. The research started with an idea that developed into other avenues being explored and considered. The research could have progressed into something

different. Time, money, resources and interests influenced how it developed. At first I was interested in exploring repetitive play in children who have suffered trauma. Whilst I was conducting the literature search for repetitive play, ideas about different types of play emerged and out of this came the proposal that play may be categorised into five behaviours that enhance development. During this process, it became clear that repetitive play is a difficult and vague concept to investigate and that firstly, play in general needed to be explored. The various steps to the research project has given me the confidence to conduct research in the future, as I now realise a study does not have to be meticulous before it can be started. Previously I thought every detail about a project should be worked out before attempting it, which always meant I did not pursue a research idea for fear of failing and not knowing how it would develop.

3.2 The Year Group

In terms of how my year group has coped with and reacted to carrying out the thesis, the process has been interesting. At various times over the last three years, waves of panic have spread through the year group. These seemed to be contagious, as soon as one person began to panic the rest of the year became anxious too. People were not keen to talk about what stage they were up to with their thesis and if they did it resulted in raised anxiety levels. Research days proved to be anxiety provoking, and we all seemed to dread having to say aloud to the rest of the group, where we were up to. If someone was ahead they didn't want to say for fear of making others panic, if they were behind it raised their anxiety by talking about it.

This process changed towards the end of the third year, when people were finishing their research project. Anxiety about the research moved to anxieties about jobs and qualifying. However, I have been very fortunate to be in a year group that have been supportive of one another. As a group we have helped each other cope with the anxieties and stresses, rather than be in competition with each other. I think this has something to do with the ethos of the course as well as individual characteristics within the group.

4. Personal Reflections

Carrying out this project has been a useful learning experience. I have learned skills in conducting research and what research involves. I have developed my skills in working with children, liaising and communicating with professionals and carers and I have developed knowledge about types and functions of play and assessments of play.

Conducting the research has also given me the opportunity to learn more about myself and to continue with personal development. I felt anxious at the start, which was about not knowing what to do and not having a clear plan. I realise I like to be in control and know exactly what to do, with clear goals and a plan. The process of undertaking the research was different from any previous experience, as I was not sure what it would involve and how it would turn out.

My feelings during the conduction of the research occurred in various stages. At first there was apprehension as to whether it could be done and frustration that I could not continue with the study until I had passed the ethics committee. In

addition, I felt excited and enthusiastic about this topic. I wanted to learn more about it and was inspired by several papers. During the two years of carrying out the research, there have also been times when I felt worried, anxious and lacked motivation. At these times, it was important for me to take breaks and to schedule in enjoyable events in the week in order to increase motivation.

The experience taught me new skills in containing anxiety. I learnt to break down the research into small achievable sections. In this way the task did not seem so overwhelming. In addition, I learnt to manage my anxiety by using distraction techniques, relaxation and keeping a social life. It also increased my confidence in that I was able to succeed.

Over the last year, there have been additional stresses other than conducting the research. I got married, moved house, looked for jobs and attended job interviews, as well as continued with the research, all in the same time period. I think this taught me that I have good coping strategies and I can get through difficult times. However, I also became aware that I sometimes take on too much and that I am reluctant to let people know that I feel stressed. I need to be careful in the future to balance out the stresses in life with positive experiences and to make sure that I make people aware, both at work and in my personal life, when I feel under pressure. I have learnt that when I am stressed, communicating with my partner, family and friends is helpful. On reflection, perhaps I should have waited to move house or to get married until after the course ended. Having all the stressful life events happen at once was at times difficult to juggle, although was also tremendous fun for a lot of the time.

Although the past year has been stressful, my wedding and honeymoon have helped me to keep the thesis in perspective. They enabled me to evaluate the significance of events in my life and when the thesis became overwhelming, it helped to remember that other events are more important. To become a Clinical Psychologist is something I want to achieve, but that in comparison, being happy in my family life is much more important.

Attending job interviews and coming to the end of the course has been a significantly challenging time. It has forced me to evaluate my roles, in which there have been many changes. This caused me some confusion and discontent. Firstly, starting work was an unsettling thought; no longer having the backup of the course. To me, starting work meant taking on more responsibility and having to know everything. It has taken me a while to realise that I will not be expected to know everything and that there will always be more to learn. Although I am a little apprehensive about starting work it is also an exciting experience.

In addition, to my change in job status, another role changed and I became a wife. This was a huge adjustment in terms of taking a family name and having a responsibility to another person. Getting married was an event that also made me evaluate who I am and where I am, which was a difficult concept to deal with, when there were other changes to my life. It was an emotional time, as well as being a positive and enjoyable experience.

5. Conclusions

There have been many challenges with conducting the research, some methodological and others personal. The methodological issues involved the difficulties with observing the children using The Make a World Technique and having to engage with the children without influencing play. In addition, creating a coding system was demanding and frustrating at times.

Personal challenges included dealing with the various emotions and obstacles involved in conducting research, changes in roles and starting work. Over the past year, although there have been stresses and some negative feelings and events, the experience of carrying out the research has been challenging but rewarding. It has given me the opportunity to acquire new skills and knowledge and has encouraged me to carry out further research in the future. It has also helped me to become aware of my strengths and areas of sensitivity.

References

Lowenfeld, M. (1950). The Nature and Use of the Lowenfeld World Technique in Work with Children and Adults. *Journal of Psychology*. Vol. 30, 325-331.

Appendix 1: Instructions to Authors

CLINICAL PSYCHOLOGY REVIEW

INSTRUCTIONS TO AUTHORS

AIS AND SCOPE: *Clinical Psychology Review* publishes substantive reviews of topics germane to clinical psychology. Its purpose is to help clinical psychologists keep up-to-date on relevant issues outside of their immediate areas of expertise by publishing scholarly but readable reviews. Papers cover diverse issues, including: psychopathology, psychotherapy, behavior therapy, behavioral medicine, community mental health, assessment, and child development.

Reviews on other topics, such as psychophysiology, learning therapy, and social psychology, often appear if they have a clear relationship to research or practice in clinical psychology. Integrative literature reviews and summary reports of innovative ongoing clinical research programs are also sometimes published. Reports on individual research studies are not appropriate.

SUBMISSION REQUIREMENTS: All manuscripts should be submitted to Alan S. Bellack, Department of Psychiatry, The University of Maryland at Baltimore, School of Medicine, 685 West Baltimore Street, Suite 618, Baltimore, MD 21201-1549, USA. Submit three (3) high-quality copies of the entire manuscript; the original is not required. Allow ample margins and type double-space throughout. Papers should not exceed 50 pages (including references). One of the paper's authors should enclose a letter to the editor, requesting review and possible publication; the letter must also state that the manuscript has not been previously published and has not been submitted elsewhere. One author's address (as well as any upcoming address change), telephone and FAX numbers, and E-mail address (if available) should be included; this individual will receive all correspondence from the editor and Publisher.

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TITLE PAGE: the title page should list (1) the article; (2) the authors' names and affiliations at the time the work was conducted; (3) a concise running title; and (4) an unnumbered footnote giving an address for reprint requests and acknowledgments.

ABSTRACT: An abstract should be submitted that does not exceed 200 words in length. This should be typed on a separate page following the title page.

STYLE AND REFERENCES: Manuscripts should be carefully prepared using the *Publication Manual of the American Psychological Association*, 4th ed., 1994, for style. The reference section must be double spaced, and all works cited must be listed. Avoid abbreviations of journal titles and incomplete information.

Reference Style for Journals:

Raymond, M.J. (1964). The treatment of addiction by aversion conditioning with apomorphine. *Behavior Research and Therapy*, 3, 287-290.

For Books:

Barlow, D.H., Hayes, S.C., & Nelson, R.O. (1984). *The scientist practitioner: Research and accountability in clinical and educational settings*. Elmsford, NY: Pergamon.

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3. Manuscripts should be double spaced and conform to the house style of CAMH. The first page of manuscript should give the title, name(s) and address(es) of author(s), and an abbreviated title (running head) of up to 80 characters. Specify the author to whom any correspondence should be addressed.

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4. Papers submitted should be concise and written in English in a readily understandable style, avoiding sexist and racist language. Papers should not exceed 4000 words, excluding references and Tables. Occasionally, longer articles may be accepted after negotiation with the Editors. Authors should include a word count of their paper. Authors whose first language is not English may send a first language version of their paper along with the English version. Please note that this is to facilitate sub-editing and is not a translation service.

5. For referencing CAMH follows a slightly adapted version of the style used by the Journal of Child Psychology and Psychiatry (i.e. APA). References in running text should be quoted showing author(s) and date. For up to three authors, all surnames should be given on first citation; for subsequent citations or where there are more than three authors, 'et al.' should be used. A full reference list should be given at the end of the article in alphabetical order.

References to journal articles should include: authors' surnames and initials; year of publication; full chapter title; full book title; editors' initials and surnames; place of publication and publisher. Please see recent issues of the The Journal of Child Psychology and Psychiatry for further details and examples.

6. Tables: these should be kept to a minimum and not duplicate what is in the text: they should be clearly set out and numbered.

7. Figures: Any figures, charts or diagrams should be submitted as camera-ready copy (clear laser copy acceptable) with clear, easy to read titles or captions.

8. Footnotes: These should be avoided as much as possible, but if necessary use a superscript number or a number in brackets for footnote indicators in the text, and give footnotes at end of article, before References.

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Clinical Child Psychology and Psychiatry brings together clinically oriented work of the highest distinction from an international and multidisciplinary perspective, offering comprehensive coverage of clinical and treatment issues across the range of treatment modalities.

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The Editor apologizes for the apparent pedantry of these instructions, but emphasizes that adherence to them will ensure rapid and efficient processing of your contributions, and will enhance the article itself.

Peer review process. The Editor will screen manuscripts for their overall fit with the aims and scope of the journal. Those that fit will be further reviewed by two or more independent reviewers. Papers will be evaluated by the editorial Board and refereed in terms of merit, readability and interest. Unsolicited manuscripts will not be returned to the author.

Submission of MSS. Four copies of each manuscript, typed in double spacing throughout, and on one side only of A4 or US standard size paper, and a copy on disk (preferably PC compatible) should be sent to the Editor at the address given below. All pages should be numbered. Email submissions are encouraged.

Format of MSS. Each manuscript should contain the following, in the correct order.

(a) Title page to include the title of the paper, full name of each author, current professional position and work context, and indicators of which author will be responsible for correspondence. A word count should also be included.

(b) Abstract: should not exceed 200 words (150 for preference), and up to 5 key words to be listed alphabetically on the same page. This page should carry the title of the paper but not the author name(s).

(c) Main text: not usually to exceed 7500 words and to be clearly organized, with a clear hierarchy of headings and subheadings (3 weights of heading maximum).

(d) References: Citation of references follows APA (American Psychological Association) style. References cited in the text should read thus: Brown (1955: 63-64); Brown, 1995, pp. 63-64; Green & Brown, 1992, p. 102, table 3). The letters a, b, c, etc., should distinguish citations of different works by the same author in the same year (Black, 1989a, 1989b).

All references cited in the text should appear in an alphabetical list, after the notes section.

(e) Figure, tables, etc.: should be numbered consecutively, carry descriptive captions and be clearly cited in the text. Keep them separate from the text itself, but indicate an approximate location on the relevant text page. Line diagrams should be presented as camera-ready copy on glossy paper (b/w, unless to be reproduced - by arrangement - in colour) and, if possible, on disk as EPS files

(all fonts embedded) or TIFF files, 800 dpi – b/w only. For scanning, photographs should preferably be submitted as clear, glossy, unmounted b/w prints with a good range of contrast or on disk as TIFF files, 300 dpi.

(f) Author biographies: On a separate sheet provide a one-paragraph bio-bibliographical note for each author - up to 100 words for a single author, but none to exceed 65 words in a multi-authored paper.

Style. Use a clear and readable style, avoiding jargon. If technical terms must be included, define them when first used. Use plurals rather than he/she, (s)he, his or hers: 'If a child is unhappy, he or she...' is much better expressed as 'When children are unhappy, they...'

Spelling. British or American spellings may be used (the 'z' versions of British spellings are preferred to the 's' versions, as given in the Oxford English Dictionary).

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Appendix 2: Letters for Ethical Approval of Research

STUDENT SUBMISSION TO SCHOOL RESEARCH ETHICS COMMITTEE

1. Student's name: HELEN SOPER 2. Course: DOCTORATE IN CLINICAL PSYCHOLOGY
(BLOCK CAPITALS)
3. Title of project: INVESTIGATING REPETITIVE PLAY IN CHILDREN: WHAT IS THE NATURE OF REPETITIVE PLAY AND HOW IS IT LINKED TO TRAUMA?
4. Summary of the project in jargon-free language and in not more than 120 words:

Sample: 10 SCHOOL CHILDREN

10 CHILDREN FROM A CHILD AND ADOLESCENT MENTAL HEALTH SERVICE
BRIEF PAPER - THERAPISTS, PSYCHOLOGISTS, PARENTS.

Research site:

BRIEF PAPER - NATIONAL ASSIST SERVICES
MAIN PAPER - WHEATON CAMHS

Design (eg experimental): STIMPSON AVENUE SCHOOL, NORTHAMPTON

QUESTIONNAIRE, SEMI-STRUCTURED INTERVIEW, OBSERVATIONAL

Methods of data collection:

I WILL GATHER INFORMATION FROM THERAPISTS, PSYCHOLOGISTS AND PARENTS, ABOUT THEIR IDEAS, THOUGHTS AND EXPERIENCES OF REPETITIVE PLAY, THROUGH QUESTIONNAIRES AND SEMI-STRUCTURED INTERVIEWS. FROM THIS INFORMATION I WILL DEVISE WAYS FOR MEASURING AND OBSERVING REPETITIVE PLAY. THE CRITERIA FOR REPETITIVE PLAY WILL THEN BE USED IN AN OBSERVATIONAL STUDY OF CHILDREN'S PLAY. I WILL OBSERVE TWO GROUPS OF CHILDREN PLAYING INDIVIDUALLY IN A SANDPIT, USING THE MAKE A WORLD TECHNIQUE. I WILL EXPLORE PLAY IN CHILDREN WHO HAVE NOT EXPERIENCED TRAUMA AND IN CHILDREN WHO HAVE EXPERIENCED TRAUMA.

Access arrangements (if applicable):

- | | | |
|--|---|--|
| 5. Will the project involve patients(clients) and/or patient(client) data? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> |
| 6. Will any invasive procedures be employed in the research? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> |
| 7. Is there a risk of physical discomfort to those taking part? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> |
| 8. Is there a risk of psychological distress to those taking part? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> |
| 9. Will specific individuals or institutions (other than the University) be identifiable through data published or otherwise made available? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> |
| 10. Is it intended to seek informed consent from each participant (or from his or her parent or guardian)? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> |

Student's signature:

.....H. Soper.....

Supervisor's signature:

.....*Phil Gwaf*.....

Date:

.....13.1.03.....

FOR COMMITTEE USE:

Immediate approval

Referral to local Hospital Ethics Committee

☒
☐

Referral to full School Committee

Decision pending receipt of further information
(specify below)

☐
☐

Committee Member's signature:

.....*David Giles*.....

Date:

.....16/8/04.....

North West Multi-centre Research Ethics Committee

first class Gateway House
Piccadilly South
Manchester
M60 7LP

Your ref:

17th June 2003

Tel: 0161 237 2394
Fax: 0161 237 2383
Email: northwest.mrec@gmsa.nhs.uk

Ms Helen Soper
13 Florence Road
Northampton
NN1 4NA

Dear Ms Soper

MREC 03/8/031 Please quote this number on all correspondence

Exploring repetitive play in children: what is the nature of repetitive play and how is it linked to trauma?

The North West MREC further reviewed your application on 10th June 2003. The documents reviewed were as follows:

- Application form signed and dated 1/2/03
- Invitation letter to participants signed and dated 1/2/03
- Parent/carer Information sheet & reply slip - version 2 dated 23/4/03
- Consent form - version 1 dated 1/4/03
- Parent/carer Information sheet & reply slip (services in Warwickshire) - version 2 dated 23/4/03
- Consent form - version 1 dated 23/4/03
- Parent/carer information sheet(school) and reply slip - version 2 dated 23/4/03
- Information sheet for parents/professionals - version 2 dated 23/4/03
- Consent form - version 1 dated 23/4/03
- Protocol
- Questionnaire on play dated 5/11/02
- CV for Ms Helen Soper unsigned, undated
- Letter of response from Helen Soper dated 23/4/03
- Second letter of response from Helen Soper dated 30/5/03
- Assessment marking sheet/research proposal
- Assessment marking sheet/external examiners research proposal
- Indemnity
- Methods of initial recruitment to study
- Compensation arrangements for subjects
- Payments to researcher
- Provision of expenses for subjects

The Central Office for Research Ethics Committees is responsible for the operational management of Multi-centre Research Ethics Committees

The members of the Committee present agreed that there is no objection on ethical grounds to the proposed study. I am, therefore, happy to give you our approval on the understanding that you will follow the conditions of approval set out below. A full record of the review undertaken by the MREC is contained in the attached Response Form. The project must be started within three years of the date on which MREC approval is given.

*While undertaking the review of your application the MREC noted the research involves the use of an existing database collected for previous research or other purposes / initial contact by a local clinician for purposes of recruitment with subsequent patient contact. For this reason you are asked to read carefully the sections concerning LREC involvement and local NHS management set out below as there are specific requirements involved when undertaking such research.

MREC Conditions of Approval

- No research procedures are undertaken until the appropriate local research ethics committee is informed of the research including the name of the local clinician involved.
- The local clinician must inform his/her NHS organisation of their co-operation in the research project.
- The protocol approved by the MREC is followed and any changes to the protocol are undertaken only after MREC approval.
- If projects are approved before funding is received, the MREC must see, and approve, any major changes made by the funding body. The MREC would expect to see a copy of the final questionnaire before it is used.
- You must promptly inform the MREC of:
 - (i) any changes that increase the risk to subjects and/or affect significantly the conduct of the research;
 - (ii) any new information that may affect adversely the safety or welfare of the subjects or the conduct of the trial.
- You must complete and return to the MREC the annual review form that will be sent to you once a year, and the final report form when your research is completed.

LREC Involvement

*When undertaking the review of your project the MREC observed that there is initial contact by a local clinician for purposes of recruitment. It is felt that these tasks appear well within his/her routine professional competence and adequate facilities for such procedure are available as part of his/her normal professional practice.

For this reason you are asked to only inform the appropriate LREC of the project by sending a copy of this letter and also giving the name and contact details of the local clinician involved. If (unusually) the LREC has any reason to doubt that the local clinician is competent to carry out the tasks required, it will inform the clinician and the MREC that gave ethical approval giving full reasons.

You are not required to wait for confirmation from the LREC before starting your research.

Local NHS Management

The local clinician must inform his/her NHS organisation of their co-operation in the research project and the nature of their involvement. Care should be taken to ensure with the NHS organisation that local indemnity arrangements are adequate.

Legal and Regulatory Requirements

It remains your responsibility to ensure in the subsequent collection, storage or use of data or research sample you are not contravening the legal or regulatory requirements of any part of the UK in which the research material is collected, stored or used. If data is transferred outside the UK you should be aware of the requirements of the Data Protection Act 1998.

ICH GCP Compliance

The MRECs are fully compliant with the International Conference on Harmonisation/Good Clinical Practice (ICH GCP) Guidelines for the Conduct of Trials Involving the Participation of Human Subjects as they relate to the responsibilities, composition, function, operations and records of an Independent Ethics Committee/Independent Review Board. To this end it undertakes to adhere as far as is consistent with its Constitution, to the relevant clauses of the ICH Harmonised Tripartite Guideline for Good Clinical Practice, adopted by the Commission of the European Union on 17 January 1997. The Standing Orders and a Statement of Compliance were included on the computer disk containing the guidelines and application form and are available on request or on the Internet at www.corec.org.uk

Yours sincerely

C.A. Stokes

Cathie Stokes
Administrator, MREC North West

Enclosures MREC response form
 Progress report form
 Membership list

Appendix 3: Chapters Two and Three - Certificate for Participants

~~~~~~~~~  
**This certificate is  
awarded to:**

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**For taking part in  
a study on  
children's play**

**Thank you**

**Signed.....**

**Helen Soper**

**Trainee Clinical Psychologist**

**Date.....**

~~~~~~~~~


**Appendix 4: Chapters Two and Three –
Covering Letter and Information Sheet**

Programme Director
Doctorate Course in Clinical Psychology
Dr Delia Cushway
BA (Hons) MSc PhD AFBPS CPsychol (Clin Foren)
School of Health and Social Sciences
Coventry University
Priory Street Coventry CV1 5FB
Telephone 024 7688 8328
Fax 024 7688 8300



COVENTRY
UNIVERSITY

Our ref

25th June 2003
Your ref

Dear Sir/ Madam,

Date

I am a Trainee Clinical Psychologist, studying at the Universities of Coventry and Warwick. I am writing to invite you and your child to take part in my research on children's play. I would be grateful if you would read the enclosed information sheet.

If you require further information please do not hesitate to contact me, either through your child's school or through Coventry University.

Thank you,

Yours sincerely

Helen Soper

Trainee Clinical Psychologist

Parent/ Carer Information Sheet

Our ref

Your ref

Study title: Exploring Children's Play

Your child is being invited to take part in a research study. Before you and your child decide it is important for you to understand why the research is being done and what it will involve. I would be grateful if you would read the following information and discuss it with others if you wish. Ask us if there is anything that is not clear or if you would like more information, and decide whether or not you wish your child to take part. Thank you for reading this.

Introduction

I am researching children's play as part of my Doctorate in Clinical Psychology at the Universities of Coventry and Warwick. This research is supervised by Dr. Delia Cushway and Jacky Knibbs, Clinical Psychologists and academic staff at Coventry University.

What is the purpose of the study?

The purpose of this study is to find out more about children's play. We would like to explore different themes and types of play. It is hoped this will lead us to understand more about how play can be used to help children.

Why has my child been chosen?

Your child has been chosen because they attend a school, where we can observe children playing. This information sheet is also being sent to other parents and children in your child's class. It is hoped that about ten children will agree to participate.

Do we have to take part?

It is up to you and your child to decide whether or not to take part. If you and your child do decide to take part you will be given this information sheet to keep and be asked to sign a consent form. You will also keep a copy of the consent form. You are free to withdraw your child from the study at any time without giving a reason. A decision to

withdraw at any time, or a decision not to take part, will not affect the standard of care you receive from a service, if you attend one in the future.

What will happen if we decide to take part?

If you decide to take part, please complete the reply slip and return it to your child's teacher by **9th May 2003**. Whilst at school, your child will then be asked to play alone in a sand pit for 15 minutes and the session will be video recorded. The sand pit will be located in a convenient place, but where others can easily observe us. Each child will have access to a number of play materials and their instruction will be 'to make a world' in the sand pit using any of the materials they wish. Whilst playing your child will be encouraged to talk about their world and I will ask questions to try to understand what they are creating e.g. Who is in your world? Are you in your world? What is happening here?

I will also ask your child's teacher whether your child is experiencing any particular difficulties. I am hoping to carry out this research in spring, summer and autumn 2003 and I will be writing it up in spring 2004.

The play will be coded to explore themes and types of play.

What are the possible disadvantages of taking part?

A possible disadvantage is that your child could become distressed if they do not wish to play, as they are playing, or if questions are asked which they do not wish to answer. However, it is up to the child to decide whether they wish to take part and continue. The questions asked will be about the play and will be non-intrusive and relevant.

What are the possible benefits of taking part?

There will be no direct benefit to your child. However, it is hoped that your child will enjoy taking part in this study and each child will receive a certificate of participation. Their participation may help us to improve the way we work with children.

What if something goes wrong?

If you wish to complain, or have any concerns about any aspect of the way you or your child have been approached or treated during the course of this study, the normal National Health Service complaints mechanisms are available to you.

Will taking part in this study be kept confidential?

All information that is collected about you and your child during the course of the research will be kept strictly confidential. All names will be removed and data will be coded so that no individual can be identified.

What will happen to the results of the research study?

All participants will be sent a short report describing the main aims, results and outcome of the study, accompanied by a letter. The results of the study will be written up for journal publication. You and your child will not be identified in any report or publication.

Who is funding the research?

The NHS and Coventry University will jointly fund the research.

Who has reviewed the study?

Multi-Centre Research Ethics Committees have approved this research.

Contact for further Information

If you require further information please do not hesitate to contact me (Helen Soper, Trainee Clinical Psychologist), through your child's school or through Coventry University (02476 888328).

Thank you.

Reply Slip

Study title: Exploring Children's Play

Name of researcher: Helen Soper (Trainee Clinical Psychologist)

Please complete if you would like to take part in the study:

Child's Teacher _____

Child's name _____

Contact details (if wish):
(address/ phone number) _____

Name of parent/ carer _____

Signature of parent/ carer _____

Please return to your child's teacher by 9th May 2003.

Thank you.

Appendix 5: Chapters Two and Three – Consent Form

Programme Director
Doctorate Course in Clinical Psychology
Dr Delia Cushway
BA (Hons) MSc PhD AFBPS CPsychol (Clin Foren)
School of Health and Social Sciences
Coventry University
Priory Street Coventry CV1 5FB
Telephone 024 7688 8328
Fax 024 7688 8300



C O V E N T R Y
U N I V E R S I T Y

Centre number:
Child Identification Number:

Study Number:

Our ref

CONSENT FORM

Title of Project: Exploring Children's Play

Your ref

Name of Researcher: Helen Soper (Trainee Clinical Psychologist)

Date

Please initial box

1. I confirm that I have read and understand the information sheet dated 23rd April 2003 (version 2) for the above study and have had the opportunity to ask questions.

☐

2. I understand that my child's participation is voluntary and that we are free to withdraw at any time, without giving any reason, without our medical care or legal rights being affected.

☐

3. I understand that my child's play will be observed and video recorded and that tapes will be destroyed at a later date. I understand that any information obtained about my child will be kept strictly confidential.

☐

4. I understand that my child's teacher will be asked whether they think my child is experiencing any particular difficulties. I give permission for my child's teacher to give this information to the researcher.

☐

5. I agree for my child to take part in the above study.

☐

Name of child _____

Name of parent _____ Date _____ Signature _____

Name of person taking consent _____ Date _____ Signature _____
(if different from researcher)

Researcher _____ Date _____ Signature _____